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ABSTRACT

Matriculation legislation, instituted in California in 1986, intended to develop a program of services to guarantee equitable access and success to all students who enroll in community colleges. In an effort to evaluate the success of its matriculation efforts, Sierra Community College (California) conducted a survey of 1,044 students in 1990. The questionnaire examined student satisfaction with admissions, orientation, assessment, counseling, advisement, and registration procedures and services. In addition, a series of questions focused on student goals, area of study, self-assessment of skills, perceived areas of needed assistance, demographics, employment status, and units attempted. For comparative purposes, the study sample was divided into groups of students who participated in all matriculation activities, those who participated in some activities, and those who did not participate in matriculation. Study findings included the following: (1) 94% of students participated in at least some matriculation activities, while 32% were fully matriculated; (2) generally, students felt matriculation services were meeting their intended goals; (3) satisfaction with the college and helpfulness of orientation materials received very good ratings; (4) students felt that orientation was not extremely effective in choosing classes; (5) counselor helpfulness received a rating of very good, and was rated highest by fully matriculated students; (6) more younger students and black students were fully matriculated; and (7) older students were more satisfied with the college. Recommendations, detailed data tables, and the survey instrument are included. (PAA)

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SIERRA COMMUNITY COLLEGE DISTRICT

Matriculation Student Survey
Spring, 1990

Dr. Gerald C. Angove
President and District Superintendent

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BACKGROUND

Matriculation was institutionalized in all California Community Colleges in 1986 with the passage of AB3 (Seymour-Campbell Matriculation Act). The intent of the bill is to develop a program of services to guarantee equitable access and success of all those who enroll in community colleges. Millions of dollars have been committed to the implementation of AB3 prompting measures of accountability to determine the degree community colleges are reaching the goals of improved student access, success, and satisfaction. A wide variety of methods have been employed statewide. They commonly reflect local needs and levels of program implementation.

Sierra College felt a need to develop a sense of student participation in and satisfaction with the program. A student survey was proposed to answer questions as to what degree the students were participating in the program, their evaluation of that participation, and their level of satisfaction with Sierra College.

METHOD

The Research and Planning Office and Matriculation Research Advisory Group referred to the *Matriculation Research Options Project, Western Nevada Community College Student Needs Survey, and Student Outcomes Questionnaires: An Implementation Handbook* by NCHEMS to develop a student evaluation survey. The instrument was reviewed and refined by J.D. Franz, consultant.

The survey questionnaire (Appendix A) had 48 questions in three major divisions. The first division included matriculation component questions and evaluations of admissions, orientation, assessment, counseling and advisement, and registration. The second section focused on student goals, major, self-assessment of skills, and perceived areas of needed assistance. Included in this division was an item requesting the students to rate their overall satisfaction with Sierra College. The third division concerned itself with demographics, when students first attended, employment, and units taken and dropped.

A modified cluster sampling was used to provide a course-by-course matrix of predetermined data for specific areas and levels. The characteristics sought in the population sample were most apt to be found in entry-level courses at and below collegiate level. They would include skill development courses as well as lower-division certificate, Associate of Arts, and California State University and/or University of California transfer courses. All of these courses would be found within one of six clusters.

The six clusters of courses and their percentage of the total number of students were:

A. Humanities/Fine Arts/English (14.9%)
B. Social Sciences (19%)
C. Mathematics/Natural Science/Engineering (17.7%)

D. Vocational/Technical/Occupational (10.2%)
E. Learning Skills/Development (22.2%)
F. Communications/Analytical Thinking (5.9%)

The original course matrix sample contained 97 full-term courses with 3,408 students as of first census. A sample of approximately 1,000 students was being sought. Accounting for attrition, the number of course sections was reduced to 72 (1,821 students as of second census) without deteriorating the integrity of the variables sought.

Instructors were asked to administer the survey in their first class meeting during the week preceding final exams (May 14-18, 1990). This was done, and a sample of 1,044 students was obtained. All student responses were catalogued and filed by cluster, course instructor, day or evening, day of the week, time, and location. Days of the week and times were taken into consideration to reduce the potential of overlapping survey administration. Students were assured anonymity and were asked to complete only one survey.

The questionnaire was administered at the very end of the Spring, 1990, semester to capture one index of success--retention. The sample was broken into four groups and compared to determine if differences existed among them. The first group included those who were fully matriculated as defined by participation in the orientation, assessment, and counseling components. The second group, those partially matriculated, would have participated in one or two of the three components. The third group, labeled nonmatriculants, consisted of those who had not participated in any matriculation. The fourth category was the sum of all three of the above.

It was speculated that the nonmatriculant sample would be small since they are more apt to enter late and leave early and since the survey was conducted at the very end of the semester when most attrition had taken place. Another speculation is that the nonmatriculants may be adult learners taking a limited number of courses and less apt to be found in the day population. The survey results are presented at the descriptive level given the inability to exercise the requisite controls of formal research methodology and the absence of a research data base to perform higher level analysis. Several Likert scales were used for evaluation; they were 3-, 4-, and 5-point scales. To avoid confusion, all 3- and 4-point means were converted to a 5-point scale mean along with a grading scale from A to F (Appendix B).

RESULTS

Appendix C lists the courses within each of six clusters, and Table 1 and Illustration 1 display the number of students by matriculation status in each of the six clusters. The four matriculation categories in each cluster are fully matriculated, partially matriculated, nonmatriculated, and all students.

Table 1
Course Clusters and Matriculation Participation Status

	Course Clusters						
	A	B	C	D	E	F	TOTAL
Matric Status	N/%*	N/%	N/%	N/%	N/%	N/%	N/%
Full	57/37	71/36	51/28	51/24	91/39	14/23	335/32
Partial	93/60	122/60	120/65	126/60	137/59	47/76	645/62
Non	6/4	5/3	14/8	34/16	4/2	1/2	64/6
Totals/%**	156/15	198/19	185/18	211/20	232/22	62/6	1,044/100

(A) Humanities/Fine Arts/English
(B) Social Sciences
(C) Natural Science/Math/Engineering
(D) Vocational/Technical/Occupational
(E) Learning Skills
(F) Communications/Analytical Thinking

* Percentage of column totals
** Percentage of grand total (1,044 Ss)

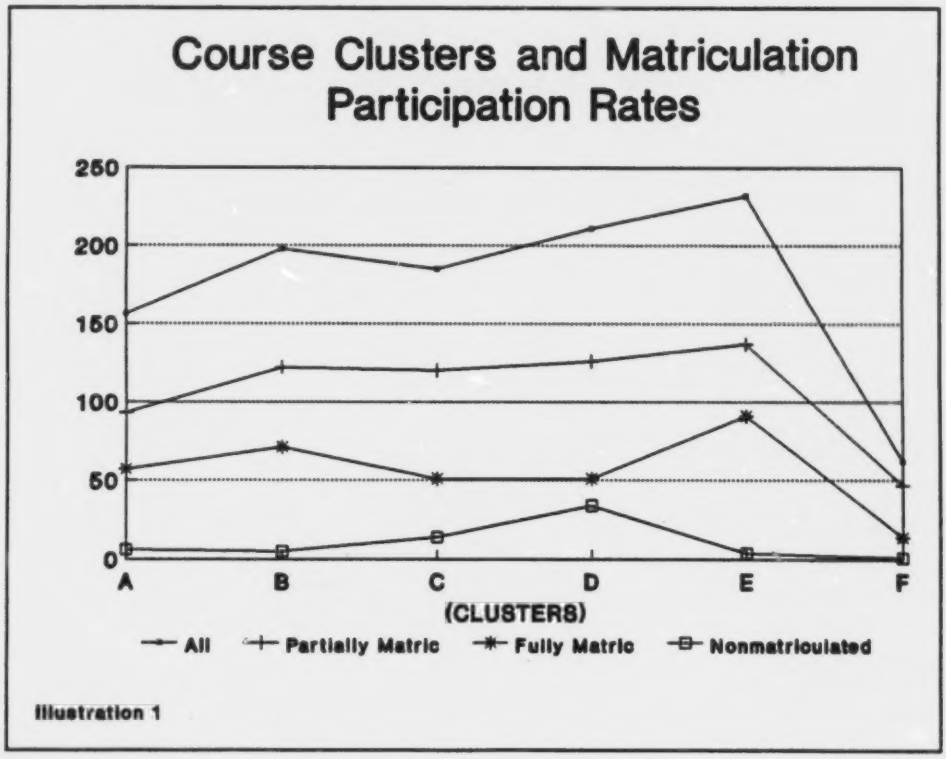


Illustration 1

Of the group surveyed, 94 percent participated in some aspect of matriculation. Two of three participants were engaged in one or two of the three components, with one of three participating in all three components. The highest rates of full participation in matriculation were noted in the clusters of Learning Skills (E), Humanities/Fine Arts/English (A), and Social Sciences (B). The highest rates of nonparticipation were found in the areas of Vocational/Technical/Occupational (D) and Natural Science/Math/Engineering (C). As suspected, the number of matriculation nonparticipants was small (64/6%). Since this small number can lead to a larger degree of variance, caution must be exercised when interpreting the findings. The largest number of participants was found in the learning skills and vocational-technical courses.

Table 2 presents an overview of 21 student evaluations of matriculation activities, self-ratings of their skills, and their overall satisfaction with Sierra College. A grading scheme based on a 5-point scale was incorporated (Appendix B), and a rank ordering of the 21 evaluations is provided to show relative comparisons of student ratings. These items will be discussed in greater detail throughout this report but are presented at this time for a general view of students' perspectives.

Table 2
Mean* Student Evaluations of Matriculation and Component Processes, Materials and Services; Their Skills; and Satisfaction with Sierra College, Spring 1990

		Matriculation Status				
		Full	Partial	Non	All	R/O
Question No and Description		Mean/Grade	Mean/Grade	Mean/Grade	Mean/Grade	
Q3	Application/Admiss Process	3.44/C+	3.43/C+	3.48/C+	3.44/C+	8
Q4	A/R Service	3.56/B-	3.64/B-	4.1 /B	3.61/B-	6
Q6	Orient/Helpful-Mtls	3.63/B-	3.91/B	0	3.68/B-	3-4
Q7	Orient/Choosing Classes	2.84/C	3.23/C	0	2.89/C	19
Q11	Explain Test Results	3.61/B-	3.68/B-	0	3.65/B-	5
Q12	Written Info/Tests	3.42/C+	3.39/C+	0	3.40/C+	10
Q13.1	Read Placement	2.66/C-	2.70/C-	0	2.68/C-	21
Q13.2	English Placement	2.72/C-	2.86/C	0	2.82/C	20
Q13.3	Math Placement	2.94/C	2.92/C	0	2.92/C	18
Q15	Voc-Career Tests/Help	3.77/B	3.63/B-	0	3.68/B-	3-4
Q18.1	Counsel/Clarify Goals	3.27/C+	3.25/C	0	3.27/C+	13
Q18.2	Counsel/Achieve Goals	3.11/C	3.20/C	0	3.20/C	14
Q18.3	Counsel/Choose Prog	3.11/C	3.05/C	0	3.09/C	16
Q18.4	Counsel/Choose Classes	3.32/C+	3.25/C	0	3.28/C+	12
Q18.5	Counsel/Understand Crs Req	3.37/C+	3.33/C+	0	3.35/C+	11
Q18.6	Counsel/Overall Help	3.45/C+	3.40/C+	0	3.43/C+	9
Q30.1	Self Eval/Reading Skills	3.95/B	3.87/B	3.96/B	3.88/B	2
Q30.2	Self Eval/English Skills	3.64/B-	3.56/B-	3.47/C+	3.56/B-	7
Q30.3	Self Eval/Math Skills	3.11/C	3.12/C	3.20/C	3.12/C	15
Q30.4	Self Eval/Study Skills	3.04/C	3.07/C	3.21/C	3.05/C	17
Q34	Satis with Sierra College	4.24/B	4.31/B+	4.27/B+	4.29/B+	1

*3- and 4-point scales converted to 5-point scale

The highest rating reported was the students' satisfaction with Sierra College at a mean of 4.29 and grade of B+. The lowest mean was the students' evaluation of their placement in reading courses with a mean of 2.68 and a grade of C-.

The scores cluster themselves on the upper end of the scale producing a skewed distribution. It is felt the most appropriate means of displaying and evaluating the data would be in quartiles with a median of 3.35. The following quartile ranges and appropriate descriptions will be used for discussion and recommendations.

Quartile	Range	Description
Q4	3.61 to 4.29	Excellent
Q3	3.40 to 3.56	Very Good
Q2	3.09 to 3.35	Good
Q1	2.68 to 3.05	Fair

Using the above quartile ranges, the top 10 ranked scores would be considered commendable. The top five scores are "excellent" and include in rank order: 1) satisfaction with Sierra College; 2) self-evaluation of reading scores; 3) helpfulness of orientation materials (tie); 4) helpfulness of vocational/career tests (tie); and 5) staff's explanation of assessment tests.

The next five activities given a "very good" rating were in rank order: 1) the service provided by the Admissions-Records staff; 2) self-evaluation of English scores; 3) the application-admission process; 4) the overall helpfulness of counselors; and 5) written information on tests.

Certain aspects of orientation, the application-admission services, and the overall help provided by counselors stand out and deserve special recognition. Areas needing concerted attention are the students' evaluations of their reading and English placement, particularly in light of their higher self-evaluations of their skills in those areas. Students gave high ratings to the information presented at orientation and low ratings to the usefulness of orientation in choosing classes. Math placement and self-evaluations of study skills were also given lower evaluations in relation to the other items. Orientation is a critical component and has as one of its major goals the preparation of students for their counseling appointments and choosing courses. It appears these differences need to be studied further to improve the linkages between activities and goals.

Most evaluations of counseling services were grouped in the second quartile and considered good. Their rank orders ranged from eighth to sixteenth place. Activities requiring a shorter term of involvement to completion, such as choosing classes, were generally given higher ratings than those requiring long-term assistance. This suggests that over a longer period of continued

counselor contacts, these ratings might increase as students find greater success in their endeavors. A longer termed longitudinal study of these factors employing a formative and summative evaluation process could test this assumption. The student educational plan (SEP) could be the document to capture and record these changes for evaluation and program modification purposes.

Admissions

There are major differences in the times when the groups of students filed their applications (Table 3). Forty-five percent filed their applications three or more months before the beginning of the semester. The next largest group consisted of those who filed their applications two weeks to three months before the opening of the term. In contrast, one in two of the nonmatriculated students filed an application from two weeks prior to the beginning of the term until sometime after the first week.

Table 3
Matriculation Status and When Application Was Filed

	Matriculation Status			
	Full	Partial	Non	Total
When Filed Application	N/%*	N/%	N/%	N/%
3+ Months Prior	149/51	219/44	10/19	378/45
2 Wks to 3 Mos Prior	103/35	169/34	18/35	290/34
1-2 Wks Prior	17/6	35/7	8/15	60/7
Week before	12/4	23/5	4/8	39/5
During First Week	13/4	43/9	11/21	67/8
After First Week	0	9/2	1/2	10/1
Don't Remember	40	140	12	192

*Percentage of total column respondents

The fully matriculated students applied for admittance to the college in significantly larger numbers than the other two groups. Partially matriculated students represent the largest group in this study and also the largest number who filed an application three or more months prior to the opening of the term. Why is there a lower percentage of full participation of these students in matriculation?

As will be seen later, most of the partials are classified as such for not having participated in orientation. It will also be seen that fully and partially matriculated students will maintain and drop approximately the same number of units to imply

that orientation may have little impact on the number of units students enroll in or drop. A more sophisticated analysis of this hypothesis is called for.

Retention research validates the importance of assessment, orientation, counseling, and other matriculation components to maximize the "fit" between a student and the institution. The more congruent the fit, the higher the retention rate. As many as one in five file a late application. It is important that matriculation services also be afforded for those filing their applications less than two weeks before the beginning of the term.

Most (88%) of the students filed their applications at the Rocklin campus (Table 4), and all students rated the convenience of filing their applications as good with a mean of 3.44 on a 5-point scale (Table 5 and Illustration 2). The service provided by the Admissions Office staff (Table 6 and Illustration 3) was given even higher ratings with a mean of 3.61 Seventy-six percent of all respondents rated the service as either good or excellent, the two highest ratings. Nonmatriculants who typically filed late rated the convenience and service even higher than the other two groups.

Nonmatriculants rated both the convenience and service of admissions higher than the other two groups. While full and partial matriculants rated convenience about the same, partial matriculants rated the service higher.

Table 4
Location Where Application Filed

	Matriculation Status			
	Full	Partial	Non	Total
Location	N/%	N/%	N/%	N/%
Rocklin	287/86	576/89	60/94	923/88
Grass Valley	9/3	13/2	1/2	23/2
Truckee/N Tahoe	3/1	3/1	1/2	6/2
Elsewhere	28/8	35/3	2/3	64/6
Don't Remember	8/2	15/2	0	25/2

Table 5
Student Rating of Application-Admissions Convenience

	Matriculation Status			
	Full	Partial	Non	Total
Rating and Value	N/%*	N/%	N/%	N/%
Poor (1)	12/4	29/5	3/5	44/4
Fair (2)	88/26	149/23	12/19	249/24
Good (3)	171/51	347/54	39/61	557/53
Excellent (4)	55/16	101/16	9/14	165/16
Mean	2.83	2.82	2.86	2.83
Converted Mean**	3.44	3.43	3.48	3.44
No Response	9	19	1	29

*Percentage of total column responses
**Converted to 5-point scale

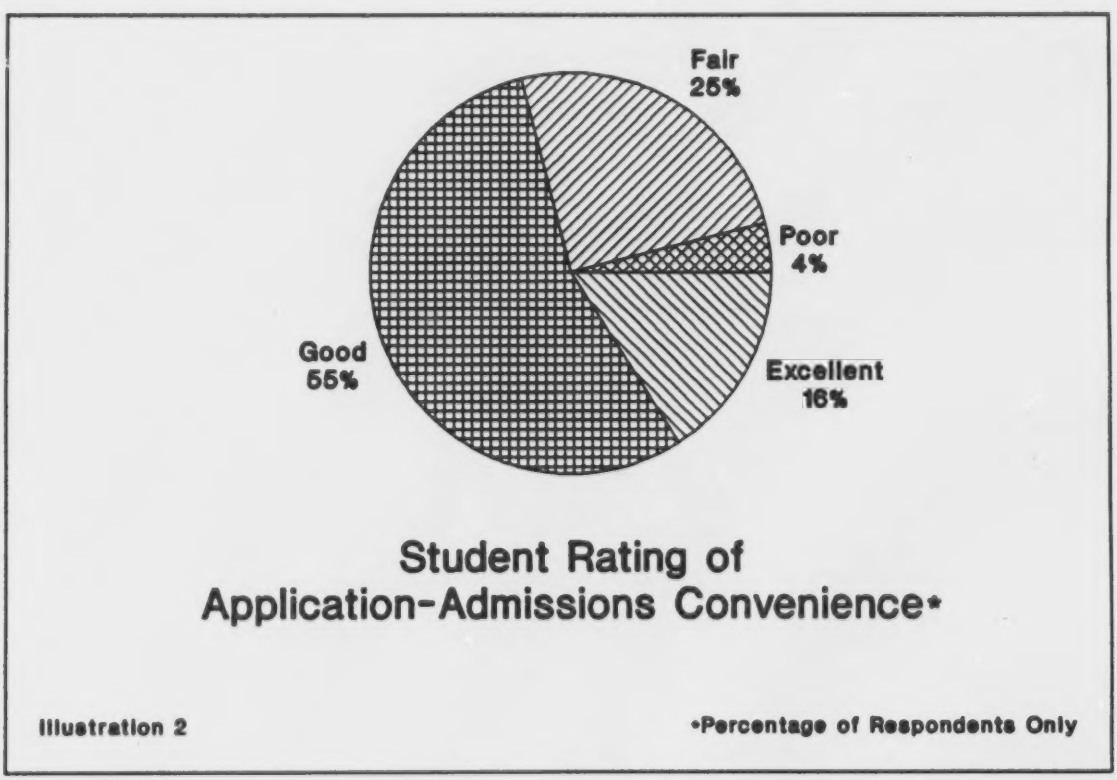
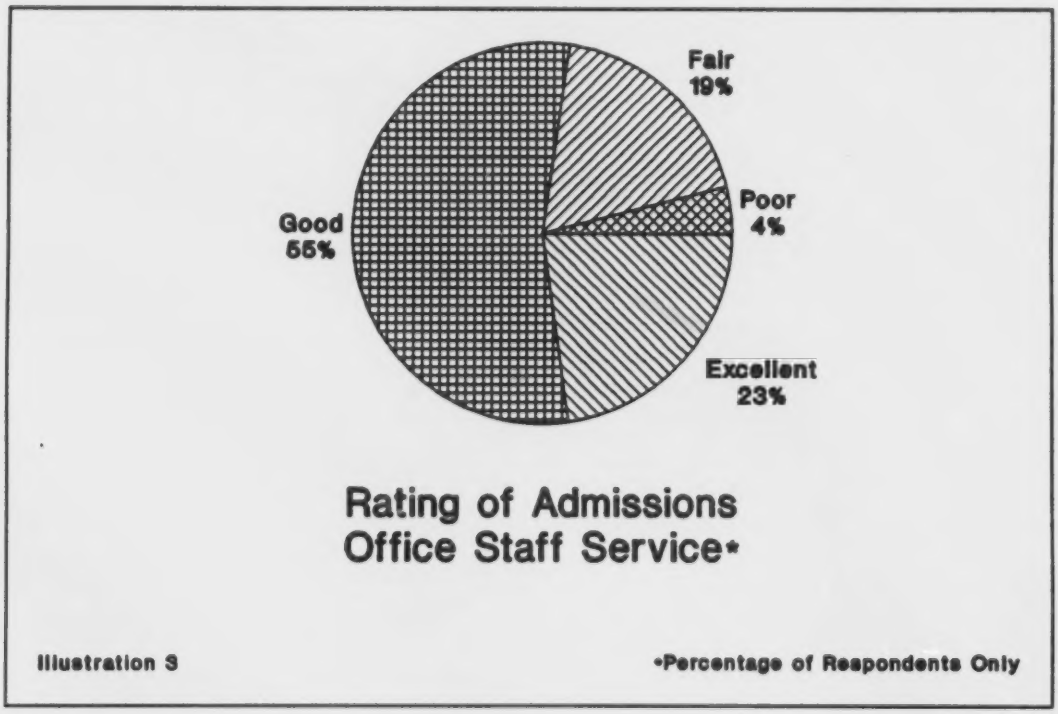


Table 6
Rating of Admissions Office Staff Service

	Matriculation Status			
	Full	Partial	Non	Total
Rating and Value	N/%	N/%	N/%	N/%
Poor (1)	11/3	27/4	0	38/4
Fair (2)	70/21	111/17	12/19	193/19
Good (3)	187/56	343/53	36/56	566/54
Excellent (4)	65/19	152/24	14/22	231/22
Mean	2.92	2.98	3.26	2.96
Converted Mean*	3.56	3.64	4.1	3.61
No Response	2/1	12/2	2/3	16/2

*Converted to 5-point scale



Orientation

Orientation is a critical step in the matriculation process. It assumes a responsibility for "educating" students to campus processes, services, and matters related to their programs and courses. It becomes the cornerstone of the students' information data base and knowledge of the institution. To that end, it plays a vital role whose importance is often overlooked.

Given the importance of orientation as a foundation for the subsequent steps of matriculation, it is shocking to find only 37 percent of the sample participated in it (Table 7). By definition, fully matriculated students had to participate and accounted for 88 percent of the total participants. Only seven percent of the partially matriculated, 47 out of a total of 645, participated.

Table 7
Orientation Participation Rates

	Matriculation Status			
	Full	Partial	Non	Total
Participant	N/%	N/%	N/%	N/%
Yes	335/100	47/7	0	382/37
No	0	545/85	0	607/58
Don't Remember	0	38/6	0	40/4
No Response	0	15/2	0	15/1

It was earlier thought that students who had test scores would have participated in orientation. The survey soundly refutes that concept. It is possible these students participated but were unaware of it. Better means of identifying and recording those who go through orientation are of a prime order.

Those students who participated in orientation found the materials to be very helpful but did not find the process nearly as helpful in choosing classes. The partial matriculants rated both the materials and helpfulness in choosing courses higher. Only 103 of the 382 participants indicated orientation led them to other services.

Clearly the purpose, goals, and objectives of orientation need to be studied and clearly defined. Student needs and expectations must be solicited and incorporated with these results to determine orientation priorities. The priorities, goals, and objectives in turn will shape the content and process to better meet intended goals.

Students need to be asked what they need and/or expect from orientation. This can be initiated in the high schools by the college counselors and asked again, verbally, prior to each orientation session. Students need to evaluate how well their needs were met at the conclusion for immediate feedback to determine if orientation was "on target."

Assessment

Assessment's primary goal is to evaluate students' skills in the areas of reading, English, and mathematics. Based on the results of these standardized instruments, course placement recommendations are made. Covered in this section will be the students' perception of their skills, the information provided, and their judgment of the final placement.

Two of every three students took a reading or math test, and seventy percent took an English test (Table 8). A range of 92 to 94 percent of the fully matriculated students took the tests while the partial matriculant participation rate ranged from 55 to 66 percent. Decidedly more students in both groups took the English assessment test followed by reading and math.

While all fully matriculated students took at least one test, 137 (21%) of the 645 partial matriculants took no tests, and another four percent could not remember whether they had taken any tests or not. It is speculated the majority of the 137 probably saw a counselor to qualify for this category since so few attended orientation.

Table 8
Tests Taken

	Matriculation Status			
	Full	Partial	Non	Total
Test	N/%*	N/%	N/%	N/%
Reading	301/92	355/57	0	656/63
English	323/99	407/66	0	730/70
Math	307/94	340/55	0	647/62
Total**	327/32	619/61	64/6	1,010
None	0	137	57	194
Don't Remember	0	23	7	30

*Percentage based on total of column respondents
**Percentage based on 1,010

When Table 8, the number of students who took assessment tests, is compared to Tables 9 through 11, the number who had them interpreted, roughly two thirds of the fully matriculated had their results explained. Approximately 57 percent of the partial matriculants had their test results explained.

Table 9
Were Reading Test Results Explained?

	Matriculation Status			
	Full	Partial	Non	Total
Responses	N/%	N/%	N/%	N/%
Yes	209/64	201/31	0	410/39
No	85/25	117/18	0	199/19
Don't Remember	12/4	47/7	0	59/6
Not Applicable	12/4	26/4	0	38/4
No Response	20/6	254/39	64	338/32

Table 10
We: sh Placement Test Results Explained?

	Matriculation Status			
	Full	Partial	Non	Total
Responses	N/%	N/%	N/%	N/%
Yes	221/66	233/36	0	454/440
No	85/25	126/20	0	211/20
Don't Remember	14/4	45/7	0	59/6
Not Appl e	6/2	18/3	0	24/2
No Resp	9/3	223/35	64	296/28

Table 11
Were Math Test Results Explained?

	Matriculation Status			
	Full	Partial	Non	Total
Responses	N/%	N/%	N/%	N/%
Yes	199/59	191/30	0	390/37
No	92/28	110/17	0	202/19
Don't Remember	12/4	40/6	0	52/5
Not Applicable	10/3	27/4	0	37/4
No Response	22/7	277/43	64	363/35

English had the highest number administered and interpreted followed by reading and math respectively. These assessment-explanation orders were the same for the fully and partially matriculated.

The students were asked to evaluate the staff's explanation of the test results (Table 12). The overall rating was in the first interquartile indicating the students found the explanation to be "excellent." The partial matriculants gave a slightly higher rating. While these are very good ratings, one in ten still did not find the explanations to be very informative, and means to improve the service can be investigated.

Table 12
Rating of Staff Explanation of Test Results

	Matriculation Status			
	Full	Partial	Non	Total
Rating and Value	N/%	N/%	N/%	N/%
Not Informative (1)	7/3	8/3	0	15/3
Not Very Informative (2)	21/8	18/6	0	39/7
Adequate (3)	104/40	112/36	0	216/38
Somewhat Informative (4)	63/24	98/32	0	161/28
Very Informative (5)	65/25	73/24	0	138/24
Mean	3.61	3.68		3.65
No Response	75	336	64	475

Question 12 (Table 13) asked students to evaluate the written information on test results. They were slightly less generous in their evaluations with an overall rating of 3.40 which places it above the median of the 21 ratings. As in the case of the explanations, staff needs to develop means to elicit student feedback on how the materials might be made more useful for them. As will be seen below, the materials may be more than adequate, but the students are rejecting the notion of their placement level.

Table 13
Rating of Written Information for Test Results

	Matriculation Status			
	Full	Partial	Non	Total
Rating and Value	N/%*	N/%	N/%	N/%
Not Informative (1)	8/3	16/5	0	24/4
Not Very Informative (2)	47/17	45/13	0	92/15
Adequate (3)	92/33	126/38	0	218/35
Somewhat Informative (4)	90/32	91/27	0	181/29
Very Informative (5)	45/16	58/17	0	103/17
Mean	3.42	3.39		3.40
No Response	53	309	64	426

*Percentage of total column respondents

Tables 14 through 16 are student ratings of how they felt about their placement in reading, English, and math courses and are not a true qualitative measure of the placement from low (poor) to high (good). They indicated whether they thought the placement was "too high" or "too low" or "just right." Math and English placements were generally regarded as "just right" (C) while reading was felt to be too low (C-).

Table 14
Rating of Placement in Reading Course

	Matriculation Status			
	Full	Partial	Non	Total
Rating and Value	N/%*	N/%	N/%	N/%
Too Low (1)	47/21	52/19	0	99/20
Just Right (2)	171/76	208/76	0	379/76
Too High (3)	8/4	13/5	0	21/4
Mean	1.83	1.85	0	1.84
Converted Mean**	2.66	2.70	0	2.68
Don't Know	30	35	0	65
Not Applicable	63	99	0	162
No Response	16	238	64	318

*Based on column respondents only
**Converted to 5-point scale

Table 15
Rating of Placement in English Course

	Matriculation Status			
	Full	Partial	Non	Total
Rating and Value	N/%*	N/%	N/%	N/%
Too Low (1)	49/18	51/15	0	100/16
Just Right (2)	212/78	270/77	0	482/77
Too High (3)	12/4	29/8	0	41/7
Mean	1.86	1.93	0	1.91
Converted Mean**	2.72	2.86	0	2.82
Don't Know	25	31	0	56
Not Applicable	26	48	0	74
No Response	11	216	0	291

*Percentage based on total column respondents
**Converted to 5-point scale

Table 16
Rating of Placement in Math Course

	Matriculation Status			
	Full	Partial	Non	Total
Rating and Value	N/%*	N/%	N/%	N/%
Too Low (1)	34/13	51/15	0	75/13
Just Right (2)	192/76	270/77	0	432/77
Too High (3)	27/11	29/8	0	54/10
Mean	1.97	1.96	0	1.96
Converted Mean**	2.94	2.92	0	2.92
Don't Know	33	31	0	69
Not Applicable	33	48	0	93
No Response	16	216	64	321

*Percentage based on total column respondents
**Converted to 5-point scale

In contrast, all students evaluated their own skills in reading and English as quite high with self-evaluated reading ability being the second highest rating of all items. Math was rated lower. Nonmatriculated students rated their reading, math, and study skills as quite high with the latter two being higher than those of the matriculants. The fully and partially matriculated students evaluated their skills in the good-to-excellent range and quite similarly.

The extreme variance between students' perceived ability and actual placement demands attention, particularly in view of reading assessment data. Reading assessment scores indicate 49 percent of the students tested read below the twelfth grade level and 20 percent below the sixth grade level.

It seems students perceive themselves as college-level readers as long as they can read, irrespective of the grade level or results of a standardized reading test. It might be expected, therefore, that any reading recommendation or placement below college level is seen as too low. Is it possible that the ability to read, regardless of grade level, is perceived as being sufficient, particularly if students have not been required to read and comprehend at that level? This issue deserves more attention, and students need to become aware of and understand the validity of the assessment-placement process if in fact it is valid and is related to their future success.

At the same time, students rated their math skills lower and felt their placement was most appropriate. If the above hypothesis for reading is valid, it would follow that students generally perceive themselves as having lower math skills and are more accepting of math placements below intermediate algebra or college level.

English skills and placement scores fell between those of reading and math. Matriculation assessment results show that 12 percent of those tested had writing skills at the noncollegiate level and another 70 percent tested at a level below freshman composition English 1A and were recommended for English A. Eighty-two percent tested below the freshman composition level but still rated their English skills as quite high (B-).

It appears much needs to be done to bridge the dissonance between the students' perception of individual skills, assessed skill level, and the rationale for recommended course placements. It is doubtful student insight and acceptance can be accomplished in a one-hour orientation session. Perhaps departmental articulation meetings with feeder high school faculty, counselors, and the students can focus on this phenomenon to reduce the apparent discrepancy in student perceptions. As noted earlier, students found the written information and counselors' explanation of assessment materials to be commendable but were not nearly as impressed with the placement recommendations. It is also understood that students learn to compensate for lack of skills and can still be successful. It is felt they might reach those same plateaus of success sooner or exceed them if fundamental skill levels are raised.

Essentially, there were no practical differences between the fully and nonmatriculated groups in the placement evaluations for any of the three skills. Overall, the students rated their skills in the bottom quartile. These lower ratings may also be partially attributed to the original 3-point scale resulting in a more restricted evaluation range than a 5- or 7-point scale.

Counseling and Advisement

Countless studies, including one at Sierra College, validate counseling as an agent in the success of students. A primary role of the counselor is to match a variety of student skills and knowledge to institutional attributes to affect the best fit between the two. When the students' goals, skills, interests, values, needs, and uncertainties are matched to the college's programs, courses, and services, a formula for success has been created.

The role of the counselor includes eliciting and bringing together information about the student, evaluating it, and then advising or making recommendations for the student. This interface becomes probably the most critical of the initial steps toward a student's success.

It was encouraging to find that 85 percent of the students had seen a counselor (Table 17) and that 49 percent had seen a counselor from two to five times (Table 18). By definition, all full matriculants (335) saw a counselor and 548 (85%) of the partial matriculants did as well. The major difference between the two groups is that the fully matriculated were more apt to see a counselor two or more times.

Given the vital role of the counselors, it is important that students take advantage of their services. It is suspected many students see a counselor only and may not have participated in other matriculation components. This seems to be substantiated by the much lower participation rates of partial matriculants in orientation (7%) and assessment (55-66%) compared to counseling (85%).

The research committee felt the need for vocational interest tests would be a high student priority in view of the large numbers who are undecided about their educational goals. As will be seen later, only five percent (53 students) of the survey sample indicated they were undecided or failed to respond (Table 34) and only 41 students decided on or changed their goals because of tests (Table 38).

Table 17
Number of Students Who Met with Counselor

	Matriculation Status			
	Full	Partial	Non	Total
Responses	N/%	N/%	N/%	N/%
Yes	335/100	458/85	0	883/85
No	0	44/7	62	106/10
Don't Remember	0	2/0	2	4/0
No Response	0	51/8	0	51/5

Table 18
Number of Times Students Met with Counselor

	Matriculation Status			
	Full	Partial	Non	Total
Number of Contacts	N/%	N/%	N/%	N/%
Once	93/28	174/30	0	267/29
2-5 Times	195/59	315/54	0	510/56
6-10 Times	31/9	50/9	0	81/9
11+ Times	12/4	40/7	0	52/6
Don't Remember	0	5	0	5
No Response	4	61	64	129

Still, 189 students or 18 percent of the sample indicated they took vocational interest tests (Table 19) and ranked their helpfulness in the "excellent" range. It appears vocational interest tests should have a larger place in the scheme of matriculation processes. The fully matriculated students participated in vocational interest testing at a greater rate and evaluated the helpfulness higher (Table 20 and Illustration 4).

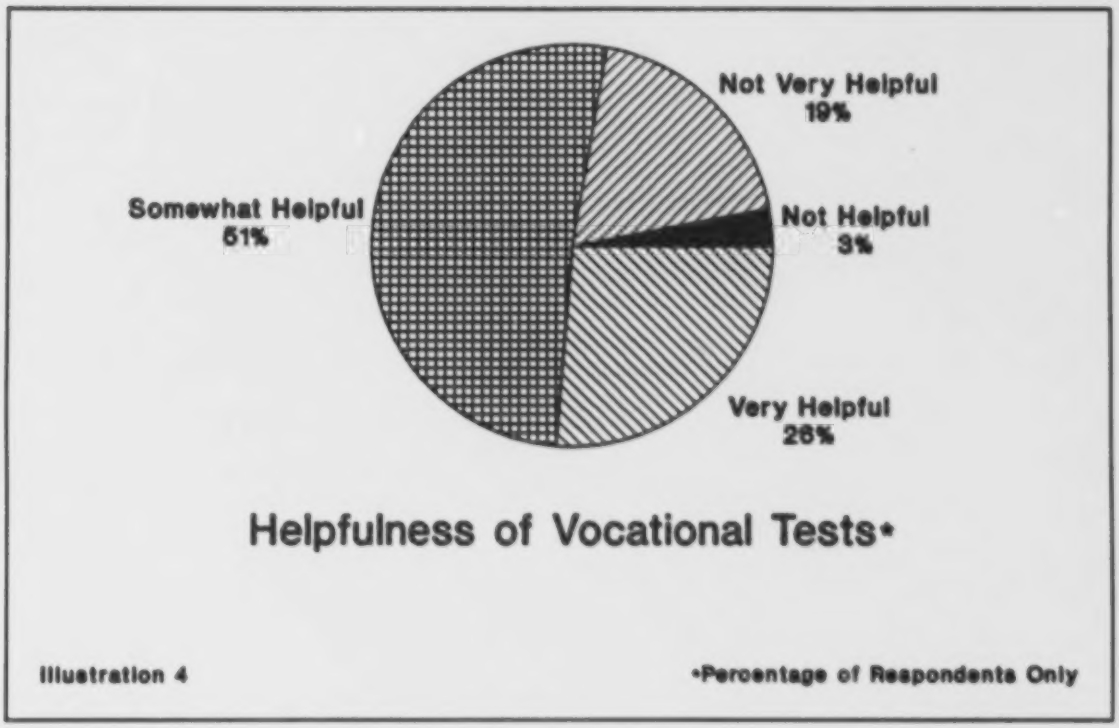
Table 19
Number of Students Taking Vocational Interest Tests

	Matriculation Status			
	Full	Partial	Non	Total
Responses	N/%	N/%	N/%	N/%
Yes	82/25	103/16	4/6	189/18
No	246/73	521/81	59/92	826/79
Don't Remember	5/2	13/2	1/2	19/2
No Response	2/1	8/1	0	10/1

Table 20
Helpfulness of Vocational Tests

Rating and Value	Matriculation Status			
	Full	Partial	Non	Total
	N/%	N/%	N/%	N/%
Not Helpful (1)	2/3	4/4	0	6/3
Not Very Helpful (2)	15/20	17/17	2/3	34/19
Somewhat Helpful (3)	34/45	57/57	1/2	92/51
Very Helpful (4)	25/11	22/22	0	47/26
Mean	3.08	2.97	0	3.01
Converted Mean*	3.77	3.63	0	3.68
No Response	259	545	61/95	865

*Converted to 5-point scale



Helpfulness of Vocational Tests*

Illustration 4

*Percentage of Respondents Only

Students were asked to rate the counselors' effectiveness in a variety of activities (Tables 21 through 26). The activities focused on goals, choosing a program and courses, and helpfulness. Generally speaking, there were no differences between the fully or partially matriculated, with one major and one moderate exception. The fully matriculated students had slightly higher evaluations in five of the six categories.

Table 21
Helpfulness of Counselor to Clarify Goals

	Matriculation Status			
	Full	Partial	Non	Total
Rating and Value	N/%	N/%	N/%	N/%
Poor (1)	47/15	67/12	0	114/13
Fair (2)	74/23	159/29	0	233/27
Good (3)	123/39	197/36	0	320/37
Excellent (4)	73/23	130/24	0	203/23
Mean	2.70	2.69	0	2.70
Converted Mean*	3.27	3.25	0	3.27
No Response	18	92	64	174

*Converted to 5-point scale

Table 22
Helpfulness of Counselor in Understanding How to Achieve Goals

	Matriculation Status			
	Full	Partial	Non	Total
Rating and Value	N/%	N/%	N/%	N/%
Poor (1)	51/16	89/16	0	140/16
Fair (2)	82/26	135/24	0	217/25
Good (3)	114/36	203/37	0	317/37
Excellent (4)	69/22	126/23	0	195/22
Mean	2.64	2.65	0	2.65
Converted Mean*	3.11	3.20	0	3.20
No Response	19	92	64	175

*Converted to 5-point scale

Table 23
Helpfulness of Counselor in Choosing a Program of Study

	Matriculation Status			
	Full	Partial	Non	Total
Rating and Value	N/%	N/%	N/%	N/%
Poor (1)	60/20	87/15	0	147/18
Fair (2)	82/27	164/28	0	246/30
Good (3)	84/28	171/29	0	255/31
Excellent (4)	75/25	166/28	0	181/22
Mean	2.58	2.54	0	2.57
Converted Mean*	3.11	3.05	0	3.09
No Response	34	117	64	215

*Converted to 5-point scale

Table 24
Helpfulness of Counselor in Choosing Classes

	Matriculation Status			
	Full	Partial	Non	Total
Rating and Value	N/%	N/%	N/%	N/%
Poor (1)	49/15	73/13	0	122/14
Fair (2)	79/25	149/27	0	228/27
Good (3)	97/31	190/35	0	287/33
Excellent (4)	93/29	132/24	0	225/26
Mean	2.74	2.69	0	2.71
Converted Mean*	3.32	3.25	0	3.28
No Response	17	101	64	182

*Converted to 5-point scale

Table 25
Helpfulness of Counselor in Understanding Course Requirements

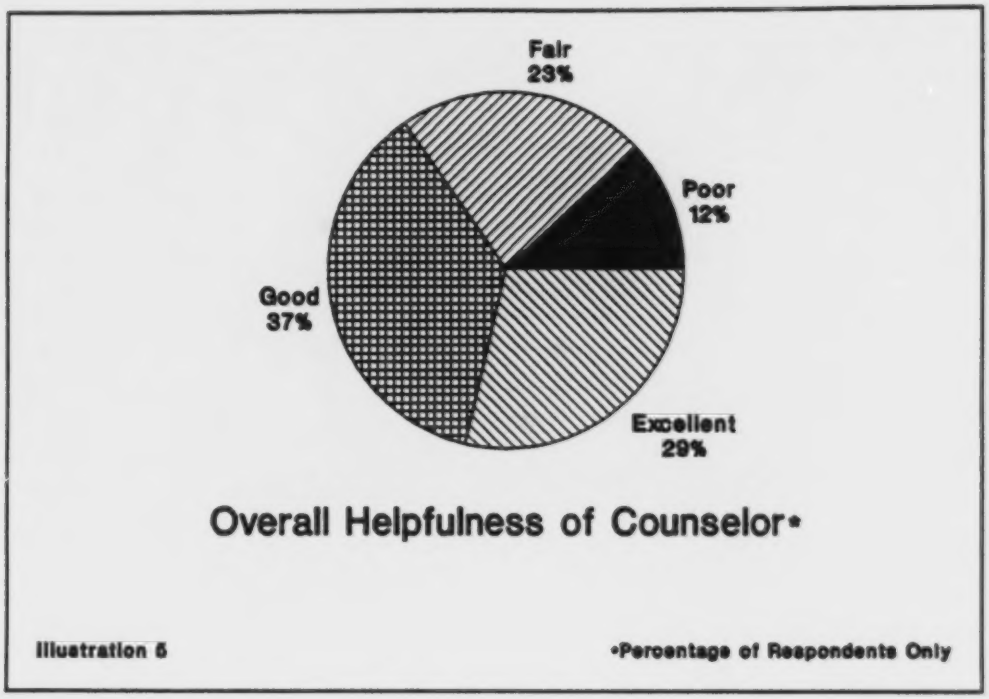
	Matriculation Status			
	Full	Partial	Non	Total
Rating and Value	N/%	N/%	N/%	N/%
Poor (1)	40/13	69/13	0	109/13
Fair (2)	78/25	126/24	0	204/24
Good (3)	100/33	205/39	0	305/36
Excellent (4)	89/29	132/25	0	221/26
Mean	2.78	2.75	0	2.88
Converted Mean*	3.37	3.33	0	3.50
No Response	28	113	64	205

*Converted to 5-point scale

Table 26
Overall Helpfulness of Counselor

	Matriculation Status			
	Full	Partial	Non	Total
Rating and Value	N/%	N/%	N/%	N/%
Poor (1)	45/14	62/11	0	107/12
Fair (2)	58/18	148/26	0	206/23
Good (3)	124/38	205/36	0	329/37
Excellent (4)	96/30	161/28	0	257/29
Mean	2.84	2.80	0	2.82
Converted Mean*	3.45	3.40	0	3.43
No Response	12	69	64	145

*Converted to 5-point scale



Fully matriculated students generally rated the counselors' help (Table 24) with higher ratings than the other two groups. This difference may be reflective of having participated in all three components and seeing the counselor more often than the other two cohorts. Orientation may have better prepared these students for the counseling appointment allowing them to get more from it.

A moderate exception concerned itself with the counselors' helpfulness to assist students in understanding how to achieve goals (Table 22). The partial matriculants rated this higher with a mean of 3.20 compared to 3.11.

It is surprising these two questions on goals received as high a rating as they did. Counseling appointments are 30 minutes long, and much has to be done in that short period of time. Goals tend to involve a complexity of values and experiences demanding more time. Perhaps the students were confident of their goals and needed only counselor assistance to clarify and review how they could be achieved. It is also possible additional goal work could have been addressed during subsequent counselor appointments for those seeing counselors more than once.

Students did not find the counselors as helpful in choosing a program of study (Table 23) with a mean of 3.09. The process connecting the program of study to orientation, assessment, and

goal setting should be investigated. While students were quite laudatory about helpfulness in choosing classes (Table 24), there does not appear to be as strong a relationship between that activity and their program of study.

Students rated the counseling effectiveness in helping them understand course requirements at the median with no difference between full or partial matriculants. A check list of all the potential factors and their relational combinations a counselor might have to address in a 30-minute appointment is staggering. It might be useful to have counselors develop such a list to demonstrate the array of variables that have to be considered. It would be even more revealing to have counselors check and perhaps create a rank of importance of those items covered with each counselee. The resultant figures could tell which variables are addressed the most and their priorities. The information could be fed back to orientation to better prepare the students for the counseling appointment. Conceivably, long-term goals, programs of study, and other more complex issues would give way to higher student priorities and their main focus at that time, such as what classes to take the next semester. A follow-up process with students could address those issues left for a later time and process.

The overall effectiveness of counselors (Table 26 and Illustration 5) was rated higher than all five of the other counseling services surveyed. The general impression of counseling services remains very good.

A final question asked if a counselor referred them to other campus services. Twenty-six percent (266 students) responded in the affirmative to elicit another important - and successful - function of the counseling process. Unfortunately, the survey did not ask to which services matriculated students were referred.

Registration

Two thirds of the students enrolled for the Spring, 1990, classes during the previous Fall (Table 27). Nonmatriculants were less apt to register early during a priority time than the fully or partially matriculated students. All but 31 of the 1,044 students enrolled at the Rocklin campus and were able to do so in one day (Tables 28 and 29). A lower percentage of the nonmatriculants registered in one day. It is presumed their fewer classes and registering when college started accounted for the protracted time to register.

Table 27
When Did Students Enroll for Spring, 1990, Semester?

	Matriculation Status			
	Full	Partial	Non	Total
Enrollment Period	N/%	N/%	N/%	N/%
Previous Semester	229/68	439/68	24/38	692/66
Semester Break	38/11	44/7	10/16	92/9
First Two Weeks of Term	41/12	99/15	21/33	161/15
After First Two Weeks	4/1	8/1	2/3	14/1
Don't Remember	19/6	44/7	6/9	69/7
No Response	4/1	11/2	1/2	16/2

Table 28
Where Students Registered

	Matriculation Status			
	Full	Partial	Non	Total
Location	N/%	N/%	N/%	N/%
Rocklin	331/99	622/96	60/94	1,013/97
Grass Valley	0	2/0	1/0	2/0
Elsewhere	0	3/1	1/2	4/0
Don't Remember	0	7/1	2/3	9/1
No Response	4/1	11/2	1/2	16/2

Table 29
Were Students Able to Register in One Day?

	Matriculation Status			
	Full	Partial	Non	Total
Responses	N/%	N/%	N/%	N/%
Yes	287/86	523/81	49/77	859/82
No	38/11	96/15	12/19	146/14
Don't Remember	6/2	7/1	2/3	15/1
Registered by Mail	1/0	7/1	1/2	9/1
No Response	3/1	12/2	0	15/1

Seventy-six percent, 641 of 845 students, reported registering in less than 30 minutes (Table 30 and Illustration 6). It is a compliment to the registration staff and system that 43 percent of all the students registered in 15 minutes or less. Nonmatriculants declared a longer period of time required, but still 85 percent of them registered in 30 minutes or less. These same students overwhelmingly stated that they "usually" or "always" got the courses they desired (Table 31 and Illustration 7). Thirty-three percent always got their courses, and 43 percent usually got them for a total of 76 percent. A higher percentage of nonmatriculants always got their courses followed by the partially and fully matriculated respectively. Again, nonmatriculants take fewer courses making it easier to get the ones they want or are satisfied with.

Table 30
How Long Did It Take to Register?

Time	Matriculation Status			
	Full	Partial	Non	Total
	N/%	N/%	N/%	N/%
15 Minutes or Less	127/45	218/42	16/33	361/43
16-30 Minutes	91/32	164/32	25/52	280/33
31-60 Minutes	47/17	94/18	4/8	145/17
61-90 Minutes	13/5	24/5	3/6	40/5
90+ Minutes	5/2	14/3	0	19/2
Don't Remember	4	13	1	18
No Response	48	118	15	181

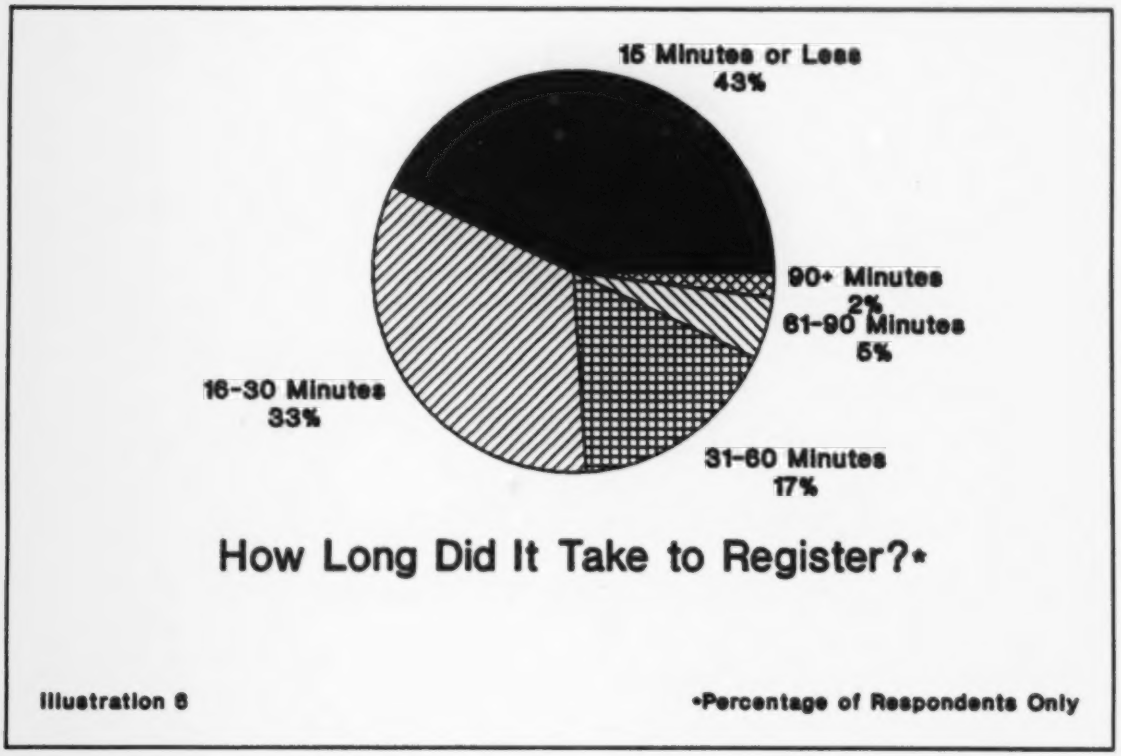
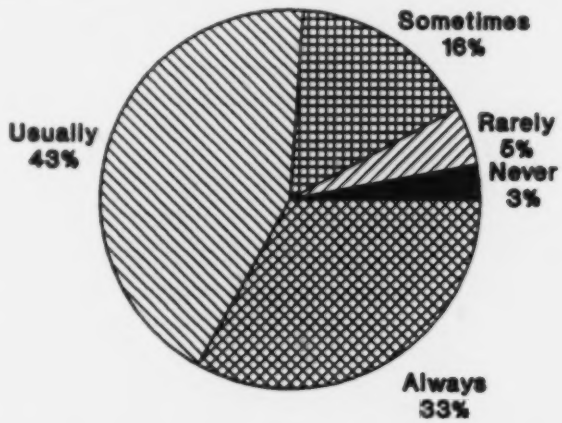


Table 31
Frequency of Getting Desired Classes

	Matriculation Status			
	Full	Partial	Non	Total
Response and Value	N/%*	N/%	N/%	N/%
Never (1)	14/4	16/3	4/7	34/3
Rarely (2)	22/7	30/5	3/5	55/5
Sometimes (3)	55/17	98/16	5/8	158/16
Usually (4)	133/41	279/45	22/36	434/43
Always (5)	104/32	198/32	27/44	329/33
Mean	3.89	3.99	4.13	4.34
No Response	7	24	3	34

*Based on number of respondents



Frequency of Getting Desired Classes*

Illustration 7

*Percentage of Respondents Only

It is presumed that those who register after earlier priority registration times will take longer due to lesser course availability or the need to have instructors approve late registrations or additions to closed sections. Crosstab tables were developed to determine when students registered, if they were able to do it one day, and how long the process took (Tables 32 and 33).

Table 32
When Students Registered and If
They Were Able to Do It in One Day

	When Students Registered					
Registered in One Day?	Preceding Semester N/%*	Semester Break N/%	1st 2 wks of Term N/%	After 1st 2 wks of Term N/%	Don't Remember N/%	Total N/%**
Yes	627/92	69/78	107/67	8/57	43/69	854/85
No	54/8	18/21	53/33	6/43	15/24	146/15
Registered by Mail	3/0	1/1	1/1	0	4/0	9/1
Total/%**	684/68	88/9	161/16	14/1	62/6	1009/100

*Percentage of column totals
**Percentage of 1009 Ss

Table 33
When Students Registered and Time Spent in Line

	When Students Registered				
Time Spent (Minutes)	Preceding Semester N/%*	Semester Break N/%	1st 2 wks of Term N/%	After 1st 2 wks of Term N/%	Total N/%
1-15	259/30	30/4	44/5	6/1	359/42
16-30	212/25	21/3	35/4	1/0	279/33
31-60	108/13	11/1	19/2	1/0	145/17
61-90	24/3	5/1	6/1	0	39/5
90+	9/1	2/0	4/1	0	19/2
Don't Remember	15/2	0	1/0	0	17/2
Total	627/73	69/8	109/13	8/1	858/100

*Percentage of 854 (186 nonrespondents)

It was found that the earlier students registered, the more likely they were to complete the process in one day. Ninety-two percent of those who registered during the prior semester priority registration time did so in one day compared to 67 percent of those who registered during the first two weeks of the semester.

There has been a concern that students must wait in line for an interminable length of time to register in their courses. This contention is usually attributed to the registration process rather than availability of openings in course sections. Table 33 refutes this perception. Four of ten students reported taking 15 minutes or less to register, and three of four reported registering in 30 minutes or less. When 75 percent of the students reported they "usually" or "always" got the courses they wanted, the system and process would have to be fairly evaluated as performing in an exceptionally effective manner.

Student Goals, Services Used, and Satisfaction with Sierra College

In the second section of the survey, students were asked questions about their educational goals, skills, areas where they needed help, and their overall satisfaction with Sierra College. In some instances the responses are compared to the Fall, 1989, *Resource Atlas* data. The purpose is to determine if and how much the sample of day students might differ from the total college population.

First, the majority (57%) of the survey sample declared a four-year college transfer goal (Table 34). This compares to 39 percent of the total population reported in the *Resource Atlas*. The overwhelming majority declared an intention of transferring to a campus of the California State University system. This was true for the full, partial, and nonmatriculants. Fewer nonmatriculants intended to transfer (41%) as compared to the matriculants (57 and 58%). Transfer rates of these students will be investigated in subsequent research.

Table 34
Main Goal of Students

	Matriculation Status			
	Full	Partial	Non	Total
Goal	N/%	N/%	N/%	N/%
Improve Skills	19/6	33/5	0	52/5
Learn Job Skills	5/2	22/3	6/9	33/3
Increase Skills	9/3	12/2	9/14	30/3
Earn Certificate	11/3	29/5	5/8	45/4
Earn AA or AS Degree	79/24	135/21	2/3	216/21
Transfer to CC	6/2	5/1	1/2	12/1
Transfer to CSU	113/34	212/33	14/22	339/33
Transfer to UC	34/10	62/10	4/6	100/10
Transfer to 4-Yr College	46/14	87/14	8/13	141/14
Personal Development	1/0	12/2	10/16	23/2
Undecided	9/3	26/4	4/6	39/4
No Response	3/1	10/2	1/2	14/1

Earning an Associate of Arts or Science Degree accounted for the next highest goal with 21 percent. The AA or AS degree was a goal of a higher percentage of the fully matriculated (24%) than the partially matriculated (21%). Only two of the nonmatriculants declared such a goal.

Nonmatriculants were more apt to declare personal development, increasing skills, learning job skills, and earning a certificate than were the other students. In general, those participating in matriculation declared higher aspirations in terms of college degrees. This is indicative of the "typical" day student as compared to the adult learner who might be taking fewer classes. The student characteristics of this survey for the nonmatriculated student match very closely the findings of previous research on the adult learner. They are usually taking one course for reasons other than college transfer or degrees. However, the small number of nonmatriculants in this survey makes generalizations about them very tentative.

These findings illuminate the differences between the day students and the institutional profile of all students found in the *Atlas*. They reinforce the suggestion that the day and evening populations may be quite distinct in respects other than age and number of courses undertaken. These differences need to be addressed more fully to determine if they have unique needs that are not being met.

Vocational/technical programs were the major area of study for all three groups followed by humanities/English and natural science/mathematics. For all three groups, those who were undecided as to their major and those in the social sciences represented the fewest "majors" (Table 35). It is particularly noteworthy to point out the highest percentage of the "undecideds" were found in the fully matriculated group and the lowest percentage in the nonmatriculated. Business is the largest major reported in the *Atlas* but is "lost" in the choices within the survey.

Table 35
Major Area of Study

	Matriculation Status			
	Full	Partial	Non	Total
Major Area	N/%	N/%	N/%	N/%
Humanities/English	63/19	153/24	9/14	225/22
Social Sciences	38/11	75/12	8/13	121/12
Natural Science/Math	60/18	105/16	10/16	175/17
Vocational/Tech	81/24	154/24	25/39	260/25
Undecided	76/23	103/16	7/11	186/18
Other	1/0	4/1	0	5/1
No Response	16/5	51/8	5/8	72/7

Students were asked when they decided on their college goal, if the goal was decided on as a result of attending Sierra

College, and what factor influenced changing or declaring a goal (Tables 36 through 38). Most students (61%), of whom nonmatriculants led by a wide margin (81%), decided on a goal before arriving on the campus. The next largest group decided on a goal after their first semester of college. Only 30 percent indicated their attendance at Sierra College was linked to either deciding upon or changing their educational goal. Of these 313 students, only four came from the nonmatriculated group to further reinforce the suspicion that they have a very narrow purpose when enrolling and are not looking to clarify or establish an educational goal as are more degree-oriented transfer students.

Table 36
When Students Decided on College Goal

	Matriculation Status			
	Full	Partial	Non	Total
Time	N/%*	N/%	N/%	N/%
Before Arriving at College	198/64	338/58	46/81	582/61
During Orientation	9/3	6/1	0	15/2
During First Semester	34/11	53/9	4/7	91/10
After First Semester	69/22	189/32	7/12	265/28
No Response	25	59	7	91

*Percentage of respondents

Table 37
Was College Goal Decided on or Changed as a Result of Attending Sierra College?

	Matriculation Status			
	Full	Partial	Non	Total
Responses	N/%	N/%	N/%	N/%
Yes	97/29	212/33	4/6	313/30
No	224/67	388/60	54/84	666/64
No Response	14/2	45/7	6/9	65/6

Table 38
Reason for Deciding on or Changing Goal

	Matriculation Status			
	Full	Partial	Non	Total
Reason	N/%	N/%	N/%	N/%
Assessment Test	8/5	8/3	0	16/4
Vocational/Career Test	10/6	17/6	0	25/6
Counselor	21/13	46/15	0	67/15
Faculty	14/9	22/7	0	36/8
Administrator	3/2	0	0	5/1
Other Staff Member	3/2	13/4	0	10/2
Doing Poorly in Major	7/4	31/10	0	38/9
Not Enjoying Classes in Major	22/14	45/15	1/25	63/14
Found Another More Enjoyable	61/38	104/34	3/75	160/36
Lack of Opportunity in Original Area	11/7	18/6	0	25/6
Total Responses*	160	304	4	445
No Response	241	449	60	750

*Multiple response column totals

Fully matriculated students were more apt to have decided on a major before arriving at Sierra College, and a higher percentage of the partially matriculated decided on a goal after the first semester. Thirty-eight percent decided on a goal during or after the first semester to suggest the counseling/ orientation and course enrollment may have an impact on this decision-making process. It also suggests a need to provide intermittent assistance to students for goal clarification or change. As seen in Table 37, 30 percent declared their Sierra College attendance did relate to either deciding on or changing their goal.

Table 38 lists the reasons leading to goal-decision changes. In rank order, the reasons given were: 1) they found courses in other areas to be more interesting and enjoyable; 2) a counselor assisted them in the process; and 3) they were not enjoying the courses in their previously declared major.

The above findings suggest that whether student goals are established or not, a formal, exploratory program over a semester or year, complemented by counselor expertise, may be a legitimate approach to assisting students in clarifying said goals. It appears exposure to other courses and enjoyment of courses have a significant influence on choosing an educational goal and that it will take one or more semesters for this to occur. Perhaps the increased use of vocational interest tests can be used to facilitate this process.

Students were also asked to rate their skills in reading, English, mathematics, and study skills (Tables 39 through 42). Their choices were poor, fair, good, or excellent. The rank order and mean of perceived strength by all students in the four areas were: 1) reading (M = 3.88); 2) English (M = 3.56); 3) math (M = 3.12); and 4) study skills (M = 3.05). Students perceive themselves as being very good readers with strong English skills. Their self-ratings for math and study skills were lower. With the exception of English, nonmatriculants rated their skills higher than those who participated in matriculation. There are little if any differences in the self-evaluations in these four areas between the fully or partially matriculated groups.

Table 39
Self-Rating of Reading Skills

	Matriculation Status			
	Full	Partial	Non	Total
Rating and Value	N/%	N/%	N/%	N/%
Poor (1)	9/3	16/3	3/5	28/3
Fair (2)	51/16	102/17	5/8	158/16
Good (3)	131/40	285/47	28/47	444/44
Excellent (4)	137/42	210/34	24/40	371/37
Mean	3.21	3.15	3.22	3.16
Converted Mean*	3.95	3.87	3.96	3.88
Don't Know	1	8	1	10
No Response	6	24	3	33

*Converted to 5-point scale

Table 40
Self-Rating of English Skills

	Matriculation Status			
	Full	Partial	Non	Total
Rating and Value	N/%	N/%	N/%	N/%
Poor (1)	11/3	27/4	5/8	43/4
Fair (2)	63/19	135/22	13/22	211/21
Good (3)	174/54	322/53	28/46	524/53
Excellent (4)	77/27	128/21	14/23	219/22
Mean	2.98	2.92	2.85	2.92
Converted Mean*	3.64	3.56	3.47	3.56
Don't Know	4/1	6/1	1/2	11/1
No Response	6	27	3	36

*Converted to 5-point scale

Table 41
Self-Rating of Math Skills

	Matriculation Status			
	Full	Partial	Non	Total
Rating and Value	N/%	N/%	N/%	N/%
Poor (1)	40/12	71/12	6/10	117/12
Fair (2)	110/34	205/34	18/30	333/34
Good (3)	116/36	240/40	27/45	383/39
Excellent (4)	56/17	92/15	9/15	157/16
Mean	2.58	2.59	2.65	2.59
Converted Mean*	3.11	3.12	3.20	3.12
Don't Know	6	9	1	16
No Response	7	28	3	38

*Converted to 5-point scale

Table 42
Self-Rating of Study Skills

	Matriculation Status			
	Full	Partial	Non	Total
Rating and Value	N/%	N/%	N/%	N/%
Poor (1)	46/14	66/11	5/14	117/12
Fair (2)	117/36	230/38	21/36	368/37
Good (3)	109/33	230/38	22/37	361/36
Excellent (4)	56/17	79/13	11/19	146/15
Mean	2.53	2.55	2.66	2.54
Converted Mean*	3.04	3.07	3.21	3.05
Don't Know	0	9	2	11
No Response	7	31	3	41

*Converted to 5-point scale

Students were asked to identify areas in which they felt they needed help (Table 43). Preparing for tests and organizing time were the two areas of greatest need. Of lesser importance, and in order of need, were assistance in taking good notes, taking tests, reading texts, no help needed, and English. Nonmatriculants had the highest percentage (28%) indicating that no help was needed and that they did not feel preparing for tests was as important as did the matriculants. Otherwise, there was

little difference between the needs of the three groups.

Table 43
Areas in Which Students Felt a Need for Help

	Matriculation Status			
	Full	Partial	Non	Total
Area	N/%	N/%	N/%	N/%
Taking Good Notes	97/13	182/14	13/12	292/14
Reading Texts	80/11	132/10	7/7	219/10
Preparing for Tests	157/22	274/21	12/11	443/21
Taking Tests	109/15	163/13	13/12	285/13
Organizing Time	156/21	258/20	22/21	436/20
English	67/9	127/10	8/8	202/10
Don't Need Help	61/8	122/9	29/28	212/10
No Response	2/0	29/2	1/1	32/2
Total Responses*	729	1,287	105	2,121

*Multiple response column totals

A similar question with different areas of services was asked in regard to achieving their educational goal (Table 44). Highest on the list was academic counseling (21%) followed by financial aid (14%), vocational/ career counseling (13%), and personal counseling (9%). Transportation and child care were needed by 41 and 31 students respectively. Nonmatriculants felt they needed financial aid (16%) and academic counseling (13%) the most. It needs to be pointed out that 35 percent of all students needed no help in these areas--the nonmatriculants led by 51 percent. Counseling becomes the greatest need followed by financial aid.

The students were next asked which programs and services they contacted for additional services or information (Table 45). The programs and services contacted most by all students were, in rank order, counseling, career center, an instructor, financial aids, job placement, and the tutoring center. Only five percent of the over 1,000 students had not visited any one of the 11 services listed. This suggests that the needs of the students are diverse and that they avail themselves of an average of two and one half services per student. The college offers a wide variety of services which are extensively used.

Student needs were similar between those who had or had not participated in matriculation with a few exceptions. Nonmatriculants were less apt to visit the counseling or career centers. Approximately half of them had no need to avail themselves of any of the programs or services. Partial

matriculants had a slightly greater need for services, and though most did not participate in orientation, they knew of and used them.

Table 44
Areas Where Students Felt a Need for More Help

	Matriculation Status			
	Full	Partial	Non	Total
Area	N/%	N/%	N/%	N/%**
Academic Counseling	91/21	180/21	11/13	282/21
Child Care	13/3	17/2	1/1	31/2
Financial Aid	59/14	118/14	13/16	190/14
Personal Counseling	38/9	79/9	4/5	121/9
Transportation	10/2	25/3	6/7	41/3
Voc/Career Counseling	65/15	111/13	4/5	180/13
Don't Need Help	150/34	281/33	42/51	473/35
No Response	11/3	37/4	1/1	49/4
Total Responses*	437	848	82	1,367

*Multiple response column totals
**Multiple response column totals less nonrespondents

Table 45
Programs Contacted for Assistance

	Matriculation Status			
	Full	Partial	Non	Total
Program	N/%	N/%	N/%	N/%
Career Center	154/14	269/16	9/11	432/16
Counseling Center	257/23	458/28	7/9	722/27
Disabled Student Center	20/2	36/2	0	56/2
EOPS	27/2	49/3	0	76/3
Financial Aid	84/8	160/10	8/10	252/9
GAIN	18/16	20/1	1/1	39/1
An Instructor	119/11	222/13	12/15	353/13
Job Placement	77/7	134/8	4/5	215/8
Skill Development Center	65/6	76/5	0	141/5
Tutoring Center	73/7	119/7	2/2	194/7
Veterans' Services	17/2	34/2	0	51/2
Haven't Visited Any	30/3	61/4	38/46	129/5
No Responses	6/1	25/2	1/1	32/1
Total Responses*	947	1,663	82	2,692

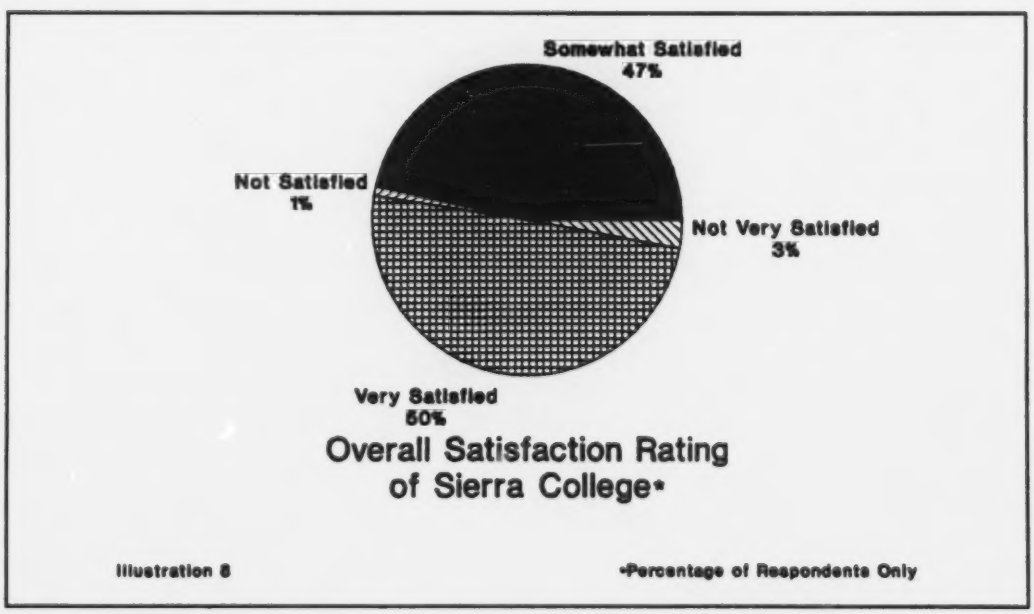
*Multiple response column totals

A prime purpose of the survey was to measure the degree of satisfaction students had with Sierra College and to determine if there were differences in the degree of satisfaction among groups (Table 46 and Illustration 8). The survey sample rated their overall satisfaction with Sierra College at a very impressive 4.29 on a 5-point scale. There were virtually no differences in the rating of those who were either fully or partially matriculated or nonmatriculated. The sum of the students' experiences at Sierra College resulted in their rating it the highest of the 21 activities listed in Table 2.

Table 46
Overall Satisfaction Rating of Sierra College

	Matriculation Status			
	Full	Partial	Non	Total
Rating and Value	N/%	N/%	N/%	N/%
Not Satisfied (1)	1/0	4/0	0	5/1
Not Very Satisfied (2)	10/3	14/2	1/2	25/3
Somewhat Satisfied (3)	162/50	280/45	32/52	474/47
Very Satisfied (4)	154/47	321/52	29/47	504/50
Mean	3.43	3.48	3.45	3.47
Converted Mean*	4.24	4.31	4.27	4.29
No Response	8	26	2	36

*Converted to 5-point scale



Student Demographics

In the third and final section of the survey, information was gathered about the students' characteristics, unit loads, and employment (Tables 47 through 58). The semester of students' first attendance was asked to determine the probability of their having participated in the matriculation program that was formally instituted in the Fall of 1989. Sierra College had already offered the services required in matriculation but not as a coordinated program under the title of matriculation.

Most students (31%) in the survey first attended college in the Fall of 1989 (Table 47). The next largest group was comprised of those who first attended prior to 1988-89 (29%) followed by those who first enrolled in the Fall of 1988 (20%). The three represented 80 percent of the total. Those first attending in the Spring of 1990 were the fourth largest group. The survey shows there was a higher percentage of the Fall, 1989, enrollees who completed all of the matriculation components. A greater emphasis was placed on the importance of the program than before, and students received more encouragement to participate.

The survey suggests the increased encouragement paid dividends with 39% of the fully matriculated having first attended in the Fall of 1989.

Table 47
Semester and Year of First Attendance

	Matriculation Status			
	Full	Partial	Non	Total
Semester and Year	N/%	N/%	N/%	N/%
Fall, 1989	132/39	176/27	13/20	321/31
Fall, 1988	75/22	131/20	3/5	209/20
Spring, 1990	47/14	65/10	19/30	131/13
Spring, 1989	11/3	41/7	3/5	56/5
Summer, 1989	7/2	6/1	3/5	16/2
Summer, 1988	4/1	9/1	0	13/1
Prior to 1988-89	59/18	216/34	23/36	298/29

Re-entry students have been a focus group for some time. An earlier survey performed during registration did not indicate there were large numbers who identified themselves as such. However, in this sample, 383 students or 37 percent declared themselves as re-entry persons (Table 48) with 45 percent of the nonmatricu- lants identifying themselves as such. It is not known on what basis they make this declaration. The response rate justifies additional research to clarify precisely who these students are and what special needs they might have.

Table 48
Those Who Classified Themselves as Re-Entry Students

	Matriculation Status			
	Full	Partial	Non	Total
Responses	N/%	N/%	N/%	N/%
Yes	110/33	244/38	29/45	383/37
No	194/58	319/50	29/45	542/52
Don't Know	24/7	53/8	5/8	82/8
No Response	7/2	29/5	1/2	37/4

Table 49 lists the number of units completed prior to the Spring of 1990. Partially matriculated students had the largest number completed with 25 units followed by the fully matriculated with 21 units. Nonmatriculants have completed an average of 14 units. The units completed are primarily a function of a student's longevity of attendance seen in Table 47.

Table 49
Units Completed at Sierra College Prior to Spring, 1990

	Matriculation Status			
	Full	Partial	Non	Total
No. Units	N/%	N/%	N/%	N/%
0	44/13	61/11	15/23	129/12
1-6	19/6	28/5	9/14	62/6
7-12	71/21	86/15	8/13	181/17
13-18	59/18	80/14	8/13	154/15
19-24	11/3	24/4	1/2	40/4
25-30	17/5	41/7	8/13	69/7
31-36	20/6	31/6	1/2	58/6
37-42	22/7	44/8	1/2	68/7
43-48	25/8	37/7	0	64/6
49-54	9/3	19/3	0	30/3
55-60	7/2	28/5	1/2	38/4
61-66	2/1	7/1	1/2	11/1
67+	4/1	15/3	1/2	25/3
No Response	25/8	66/12	10/16	115/11
Mean	20.83	25.32	13.94	*.**

Fifty-three percent of the fully matriculated students first attended Sierra College in the 1989-90 school year, compared to 37 percent of the partial matriculants, but had completed an average of only four less units. Partial matriculants had a larger percentage who attended prior to 1988-89, and 36 percent of the nonmatriculants attended prior to 1988-89.

These findings suggest the fully matriculated students complete more units per semester than the partial or nonmatriculants even though fully and partially matriculated students reported taking the same number of units in the Spring of 1990. Additional research is needed to confirm this.

Table 50 shows the number of units taken by each of the three groups in the Spring of 1990. The average was roughly 12 for all students as well as those fully and partially matriculated. Nonmatriculated students had taken an average of eight units. Again, students taking or who have completed more units were more apt to have participated in some aspect of matriculation. This seems to reaffirm the contention that nonmatriculants are not nor do they intend to be full-time students.

Table 50
Units Taken in Spring, 1990

	Matriculation Status			
	Full	Partial	Non	Total
Units	N/%*	N/%	N/%	N/%
1	0	0	0	0/0
2	0	1/0	0	1/0
3	6/2	21/4	9/15	36/4
4	2/1	10/2	7/12	19/2
5	1/0	4/1	0	5/1
6	16/5	32/6	8/13	56/6
7	8/2	22/4	5/8	35/4
8	9/3	11/2	1/2	21/2
9	30/9	47/9	9/15	86/9
10	22/7	27/5	4/7	53/6
11	16/5	20/4	1/2	37/4
12	72/22	104/19	9/15	185/20
13	64/20	66/12	2/3	132/14
14	20/6	56/10	1/2	77/8
15	25/8	35/7	1/2	61/6
16	16/5	35/7	2/3	53/6
17	11/3	18/3	1/2	30/3
18	5/2	15/3	1/2	21/2
19	3/1	10/2	0	13/1
20	0	3/1	0	3/0
21	0	4/1	0	4/0
22	1/0	0	0	1/0
Mean	11.93	11.83	8.33	11.53
No Response/%**	8	104	3	125

*Percentage of total column respondents
**Includes some questionable values over 22 units and nonrespondents

Tables 51 and 52 indicate if students had dropped any courses in the Spring semester and the number of units dropped. The survey was administered after the deadline for dropping courses. Therefore, no additional units could be dropped and, as seen, the retention rate for this sample was quite high.

Table 51
Number of Students Who Dropped Classes in Spring, 1990

	Matriculation Status			
	Full	Partial	Non	Total
Responses	N/%	N/%	N/%	N/%
Yes	130/39	210/33	12/19	352/34
No	189/56	329/61	49/77	630/60
No Response	16/5	43/7	3/5	62/6

Table 52
Number of Units Dropped in Spring, 1990

	Matriculation Status			
	Full	Partial	Non	Total
Units	N/%*	N/%	N/%	N/%
1	17/5	20/4	0	40/4
2	6/2	9/2	0	17/2
3	64/20	84/15	9/14	166/16
4	24/7	35/6	1/2	67/6
5	2/1	8/1	0	10/1
6	7/2	13/2	1/2	26/3
7	1/0	4/1	1/2	6/1
8	3/1	3/1	0	6/1
9	2/1	0	0	2/0
10	0	2/0	0	2/0
11	0	0	0	0
12	0	0	0	0
13	0	0	0	0
14	0	0	0	0
15	1/0	0	0	1/0
Mean	3.41	3.48	3.67	3.45
No Response/%**	208/62	389/60	52/81	699/67

*Percentage of total column respondents
**Percentage of respondents plus nonrespondents

Only 34 percent reported dropping any classes. A higher percentage of fully matriculated students dropped classes, and nonmatriculants dropped the least at 19 percent. Full and partial matriculants dropped the same number of units, 3.41 and 3.48 respectively. When the average number of units carried are added to those dropped, these students would have started with 15 and dropped one three-unit course. These are the students who

persisted to the end of the semester. They should be compared to those who had dropped out to determine if differences existed between the persisters and nonpersisters and what those differences are.

Two of three students surveyed attended only day classes with the fully matriculated representing by far the largest percentage (72%) followed by the partially matriculated at 59 percent (Table 53). One of four took a combination of day and evening courses with the highest percentage represented by the partially matriculated. Nothing in this survey can account for these differences.

Table 53
When Spring, 1990, Classes Met

	Matriculation Status			
	Full	Partial	Non	Total
Times	N/%	N/%	N/%	N/%
Day Only (before 4pm)	241/72	380/59	43/67	664/64
Evening Only (after 4pm)	6/2	41/6	4/6	51/5
Both	64/19	159/25	12/19	235/23
No Response	24/7	65/10	5/8	94/9

Sixty-seven percent of all students were employed, and there were no percentage differences between the groups (Table 54). There were 700 who worked an average of 27 hours per week (Table 55). Nonmatriculants worked an average of 33 hours per week with those who participated in matriculation averaging 27 hours. In all three cases, the students indicated working a considerable number of hours. Forty-six percent worked over half time while taking nearly a full-time unit load.

Table 54
Were Students Employed in Spring, 1990?

	Matriculation Status			
	Full	Partial	Non	Total
Responses	N/%	N/%	N/%	N/%
Yes	225/67	434/67	42/66	701/67
No	90/27	157/24	19/30	266/26
No Response	20/6	54/8	3/5	77/7

Table 55
Number of Hours Worked - Spring, 1990

	Matriculation Status			
	Full	Partial	Non	Total
Hours	N/%*	N/%	N/%	N/%
1-5	1/1	1/0	0	3/0
6-10	7/3	19/4	3/7	32/5
11-15	12/5	37/8	0	52/7
16-20	49/22	75/16	3/7	135/19
21-25	55/25	73/16	4/10	141/20
26-30	36/16	59/13	6/15	108/15
31-35	18/8	34/7	4/10	64/9
36-40	34/15	65/14	19/46	129/18
41-45	6/3	8/2	0	15/2
46-50	2/1	6/1	1/2	11/2
51+	2/1	5/1	1/2	9/1
Mean	26.96	26.97	32.98	27.44
No Response/%**	113/34	185/29	23/36	344/33

*Percentage of total respondents
**Percentage of respondents plus nonrespondents

Tables 56 and 57 were constructed to show the relationship between the number of hours worked per week and the number of units taken and dropped. Two of every three students in the survey worked. Unfortunately, the frequencies for hours worked were separated as to give a category of 31 to 40 hours rather than 30 to 39 hours. Consequently, it is difficult to accurately state the percentage of students who were employed full-time. However, valuable data was still obtained.

Eighty-four percent of those students taking ten or more units also worked one to 20 hours a week with most working between 11 and 20 hours. Sixty-six percent of those working 20 to 40 hours a week were also taking ten or more units. Not only do a large number of the students work, they are working quite a few hours while enrolling in a fairly large number of units. The hours worked need to be considered as one of the factors when assisting students in the development of their programs to make certain students are carrying realistic loads for work and college.

Table 56
Number of Hours Worked Per Week by Units Taken
All Students: Spring, 1990

Units Taken	Hours Worked: 1-10	11-20	21-30	31-40	41-50	51+	Total/%*
16+	8	33	29	16	1	0	87/13
13-15	11	65	81	26	3	0	186/27
10-12	9	62	81	54	7	5	218/32
7-9	5	18	40	37	7	2	99/14
4-6	1	4	13	32	6	2	58/8
1-3	1	3	2	25	2	0	33/5
Total/%*	35/5	185/27	246/30	190/28	26/4	9/1	691

*Percentage of 691 respondents

Table 57
Number of Hours Worked Per Week and Units Dropped
All Students: Spring, 1990

Units Dropped	Hours Per Week: 1-10	11-20	21-30	31-40	41-50	51+	Total/%*
16+	0	0	0	0	0	0	0
13-15	1	0	0	0	0	0	1/0
10-12	1	0	0	0	0	0	1/0
7-9	0	2	4	4	0	0	10/4
4-6	7	21	29	21	2	1	81/32
1-3	9	38	60	49	4	2	162/64
Total/%*	18/7	61/24	93/37	74/29	6/2	3/1	255

*Percentage of 255 respondents

Only twenty-four percent of the students surveyed reported dropping any classes. Two of every three of those students dropped from one to three units. The balance dropped courses

amounting to four to six units. The survey sample displayed a low drop rate, but it must be remembered they were the "persisting" students who had remained enrolled for the total semester. Students who had completely withdrawn from all classes were not represented in the sample.

The highest level of education attained was considered to be important to determine if the sample was representative of those who would normally participate in the matriculation program. It was found that three of four students had received a high school diploma as their highest educational accomplishment (Table 58) and that eleven percent had completed a level ranging from a college certificate to a doctorate. Nonmatriculants had a higher percentage with degrees to suggest they may be more typical of the adult learner profile than the more traditional day student.

Table 58
Highest Level of Education Completed

	Matriculation Status			
	Full	Partial	Non	Total
Level	N/%	N/%	N/%	N/%
Less than H.S.	10/3	15/2	2/3	27/3
H.S. Diploma	265/79	478/74	34/53	777/74
G.E.D.	13/4	32/5	3/5	48/5
Certificate	7/2	13/2	0	20/2
AA or AS	18/5	44/7	9/14	71/7
BA or BS	0	7/1	10/16	17/2
MA or MS	1/0	1/0	2/3	4/0
Doctorate	1/0	1/0	0	2/0
No Response	20/6	54/8	4/6	78/8

Three demographic areas were given special attention because of sensitivity to focus groups. Those areas were age, gender, and ethnicity. Several key items were placed in a crosstab format to give greater dimension to the three factors. Nothing significant was found to indicate any disproportional or negative impacts.

Age

The average age of the survey group was 25 with the fully matriculated being the youngest group (M = 24) and the nonmatriculants the eldest (M = 33) (Table 59). The largest number of students, in rank order, fell into the age groups of 19 (23%), 21 to 24 (19%), 20 (18%), and 18 or younger (11%).

Table 59
Age of Students Surveyed

	Matriculation Status			
	Full	Partial	Non	Total
Age	N/%*	N/%	N/%	N/%**
1-18	48/46	55/52	2/2	105/11
19	94/43	115/53	9/4	218/23
20	55/31	121/68	3/2	179/18
21-24	42/23	130/70	13/7	185/19
25-29	24/32	45/61	5/7	74/8
30-34	19/27	44/62	8/11	71/7
35-39	11/26	29/67	3/7	43/4
40-44	9/20	30/67	6/13	45/5
45-49	9/28	18/56	5/16	32/3
50-59	3/23	9/69	1/8	13/1
60+	2/33	0	4/67	6/1
No Response	19/26	49/67	5/7	73/7
Total	335	645	64	1,044
Mean	23.49	24.52	32.74	24.74

*Percentage based on age
**Percentage based on 971 respondents

The matriculation program was formally implemented in the Fall of 1989, and it was expected that a larger percentage of the students under age 21 would have participated in all of the matriculation components. This survey did not support that hypothesis. As seen in Table 59, a higher percentage of those 20 and younger participated in some of the components (partially matriculated). However, the percentage of fully matriculated students increased from 31 to 43 to 46 percent for those in the age groups of 20, 19, and 18 and younger respectively. This seems to indicate an increasingly larger number of the new students are participating in the three matriculation components surveyed.

Those students who are 21 and older would be less likely to have participated in all components of the "required" matriculation program had they all started college at the age of 18. Many of the components of matriculation were already in

force and came under the umbrella of "matriculation" with the passage of AB3. It is speculated a large number of those 21 and older participated in some aspect of the former counseling program when they first enrolled or later.

Younger students were more apt to have also participated in orientation (Table 60). Conversely, those 18 and younger met with a counselor less frequently than those 19 or 20 years of age. The longer a student is on the campus, the more apt he or she is to see a counselor (Table 61). It is commendable that 92 to 97 percent of the above three age groups saw a counselor. Perhaps there is a lower percentage of those 18 and younger participating in counseling (92%) because the group also includes high school advance placement students not required to participate in any aspect of matriculation.

The younger students were also more likely to have participated in the assessment process (Table 62). The 19- and 20-year-olds participated in assessment in greater numbers than any other group. They were followed by those 18 and younger. This coincides with the observation found in Table 59 that more of the younger students participate in some aspect of matriculation.

Table 60
Age and Participation Rate in Orientation

	Yes	No	Don't Remember	Total
Age	N/%*	N/%	N/%	N/%**
≤18	52/55	38/40	4/4	94/11
19	102/52	89/45	5/3	196/23
20	60/36	103/61	5/3	168/20
21-24	48/21	94/62	10/7	152/18
25-29	25/39	38/59	2/3	65/8
30-34	21/34	40/65	1/2	62/7
35-39	13/37	19/54	3/9	35/4
40-44	10/27	27/73	0	37/4
45-49	9/41	13/59	0	22/3
50-59	3/33	6/67	0	9/1
60+	2/100	0	0	2/0
Total/%**	345/41	467/55	30/4	842

*Percentage of each age group
**Based on 842 respondents

Table 61
Ages of Students Who Met with a Counselor

	Yes	No	Total
Age	N/%*	N/%	N/%**
<18	86/92	7/8	94/11
19	184/94	11/6	196/23
20	163/97	5/3	168/20
21-24	143/94	9/6	152/18
25-29	65/100	0	65/8
30-34	58/94	4/6	62/7
35-39	34/97	1/3	35/4
40-44	36/97	1/3	37/4
45-49	22/100	0	22/3
50-59	9/100	0	9/1
60+	2/100	0	2/0
Don't Remember	1/50	1/50	2/0
Total/%**	802/95	38/5	842/100

*Based on total of each age group
**Percentage of 842 (960 nonrespondents)

Table 62
Tests Taken by Age

	Reading	English	Math	None	Don't Remember	Total
Age	N/%*	N/%	N/%	N/%	N/%	N/%**
<18	80/13	89/13	78/13	12/7	1/4	105/10
19	143/23	175/25	158/26	23/13	10/39	218/21
20	125/20	144/21	128/21	19/11	6/23	179/17
21-24	103/17	112/16	96/16	45/25	5/19	185/18
25-29	47/8	48/7	42/7	18/10	1/4	74/7
30-34	43/7	47/7	38/6	19/11	1/4	71/7
35-39	27/4	28/4	26/4	8/5	1/4	43/4
40-44	22/4	24/3	23/4	16/9	0	45/4
45-49	17/3	16/2	14/2	10/6	0	32/3
50-59	8/1	5/1	5/1	4/2	0	13/1
60+	2/0	2/0	1/0	3/2	1/4	6/1

*Percentage based on number of responses in each column
**73 (7%) nonrespondents out of 1,044 for N of 971

Satisfaction with Sierra College (Table 63) appears to increase with age. Older students are more apt to be taking one class for avocational or recreational purposes and may evaluate

that experience higher than the younger students who typically must go through a more complex process of developing a program of four to five courses per term. In any event, the overall satisfaction was quite high with a converted mean of 4.33 or a grade of B+.

Table 63
Satisfaction with Sierra College by Age

	Not Satis.	Not Very Satis.	Somewhat Satis.	Very Satis.	Total	Converted Mean
	N/%*	N/%	N/%	N/%	N/%**	
<18	0	2/2	57/63	32/35	91/11	4.0
19	2/1	6/3	101/53	83/43	192/23	4.1
20	0	4/2	90/54	73/44	167/20	4.2
21-24	1/1	5/3	67/45	75/51	148/18	4.3
25-29	1/2	1/2	21/33	41/64	64/8	4.5
30-34	0	2/3	24/39	35/57	61/7	4.3
35-39	0	0	8/23	27/77	35/4	4.7
40-44	0	2/5	12/32	23/62	37/5	4.5
45-49	0	0	3/14	19/86	22/3	4.9
50-59	0	0	3/33	6/67	9/1	4.6
60+	0	0	0	2/100	2/0	5.0
Total/%**	4/0	22/3	386/47	416/50	828/100	4.3

*Based on total of each age group
**Based on 828 respondents (216 nonrespondents)

Gender

Educational opportunities and success of women remain a prime concern of Sierra College and continue to drive programs such as Title IX, Affirmative Action, Gender Equity, and Displaced Homemaker.

The majority of survey respondents were women (Table 64), while the total District enrollment is comprised of 57 percent women. The lower percentage found in the survey is attributed to the sampling of day classes where there is a smaller percentage of women than in the evening. Men represented 43 percent of the survey sample and 44 percent of the total District enrollment. Seven percent of the survey sample did not respond, and it is suspected the 75 to 77 students who failed to complete the last page of the survey may account for the difference.

Table 64
Gender of Survey Respondents

	Matriculation Status			
	Full	Partial	Non	Total
Gender	N/%*	N/%	N/%	N/%
Male	149/33	267/59	35/8	451/43
Female	168/32	331/63	24/5	523/50
No Response	18/26	47/67	5/7	70/7

*Percentage based on gender

A number of factors were compared to gender, and large differences between males and females were not found. This is clearly seen in Table 64 where little gender differences are seen among those who were fully, partially, or nonmatriculated. Two exceptions to this generalization are found first in Table 65 where a higher percentage of women saw a counselor (91%) compared to men (86%) and in the greater inclination for women to file their applications earlier (Table 66). Eighty-two percent filed their applications two weeks or more before the semester began while 76 percent of the men filed during this period.

Table 67 attempts to detect if any outstanding differences exist in the tests taken by gender and ethnicity. Women participated in all three assessment areas at a slightly higher (2 to 4%) rate than males with the widest margin in reading assessment.

Table 65
Gender of Those Who Met with Counselors

	Male	Female	Total
	N/%*	N/%	N/%**
Yes	366/86	459/91	825/89
No	57/13	43/9	100/11
Don't Remember	3/1	0	3/0
Total/%**	426/46	502/54	928/100

*Based on column totals
**Based on 928 Ss (116 nonrespondents)

Table 66
Application Filing Date by Gender

	Male	Female	Total
	N/%*	N/%**	N/%***
3+ mos before sem	167/46	190/44	357/44
2-12 wks before sem	111/30	162/38	273/34
1-2 wks before sem	32/9	27/6	59/7
Week before sem	19/5	20/5	39/5
During 1st wk of sem	31/8	30/7	61/8
After 1st wk of sem	5/1	3/1	8/1
Don't remember	84	88	172
Total/%****	449/46	520/54	969/100

*Based on 365 responses
**Based on 432 responses
***Based on 797 responses
****Based on total of 797 respondents and 172 nonrespondents

Table 67
Tests Taken by Gender and Ethnicity

	Reading	English	Math	None	Don't Remember	Total
Gender	N/%*	N/%	N/%	N/%	N/%	N/%**
Male	277/61	317/70	278/62	97/22	12/3	451/46
Female	341/65	374/72	333/64	82/16	13/2	532/54
Caucasian	494/63	560/71	497/63	148/19	20/3	785/82
Non-Caucasian	162/92	170/96	150/85	46/26	10/6	177/18

*Percentage of total male and female or Caucasian and non-Caucasian
**983 total gender (61 or 6% nonrespondents) and 962 total ethnicity (82 or 8% nonrespondents)

Caucasians and non-Caucasians had quite different participation rates. First, 82 percent of the respondents were Caucasian. However, non-Caucasians participated in assessment at higher rates by 22 to 29 percent. No speculation is offered as to why there are such differences. All minorities were collapsed into one group to minimize the variation that might be due to very small samples. The findings will result in further research and analysis.

A smaller percentage of the women attended orientation (Table 68), took ten or more units (Table 69), and dropped up to six units (Table 70). More women (97%) worked full- or part-time than men (93%) with a higher percentage than males working 20

hours a week or less (Table 71).

The fact that women initiate the process to attend college sooner and see a counselor has been shown in past studies to improve student success. This survey does not test the relationships or variance between these events and success. However, it appears women are more realistic in balancing the number of units taken and hours worked as observed by the fewer number of units dropped and their slightly higher degree of satisfaction with Sierra College (Table 72).

Table 68
Gender and Participation Rate in Orientation

	Male	Female	Total
Participant	N/%*	N/%	N/%**
Yes	174/39	188/36	362/38
No	255/58	311/60	566/59
Don't Remember	14/3	19/4	33/3
Total/%**	443/46	518/54	961/100

*Percentage based on column totals
**Percentage of 961 (83 nonrespondents)

Table 69
Number of Units Taken by Gender

	Male	Female	Total
Units	N/%*	N/%	N/%**
1-3	15/3	25/5	40/4
4-6	30/7	53/10	83/9
7-9	71/16	78/15	149/16
10-12	128/29	160/31	288/30
13-15	131/29	144/28	275/29
16+	70/16	59/11	129/13
Total/%**	445/46	519/54	964/100

*Percentage based on column totals
**Percentage based on 964 Ss (80 nonrespondents)

Table 70
Units Dropped by Gender

	Male	Female	Total
Units	N/%*	N/%	N/%**
1-3	106/62	119/68	225/65
4-6	57/34	45/26	102/30
7-9	5/3	9/5	14/4
10-12	1/1	1/1	2/0
13-15	1/1	0	1/0
16+	0	0	0
Total/%**	170/49	174/51	344/100

*Percentage based on column totals
**Percentage based on 344 Ss (700 nonrespondents)

Table 71
Hours Worked by Gender

	Male	Female	Total
Hours	N/%*	N/%	N/%**
1-10	11/3	23/6	34/5
11-20	83/26	103/28	186/27
21-30	116/36	133/36	249/36
31-40	92/28	99/27	191/28
40+	23/7	12/3	35/5
Total/%**	325/47	370/53	695/100

*Percentage based on column totals
**Percentage based on 695 Ss (349 nonrespondents)

Table 72
Satisfaction with Sierra College by Gender

	Male	Female	Total
	N/%*	N/%	N/%**
Not Satisfied	3/1	1/0	4/0
Not Very Satisfied	12/3	12/2	24/3
Somewhat Satisfied	237/54	214/41	451/47
Very Satisfied	185/42	292/56	477/50
Total/%**	437/46	519/54	956/100
Mean	3.4	3.5	3.5
Converted Mean***	4.2	4.3	4.3

*Percentage based on column totals
**Percentage based on 956 Ss (88 nonrespondents)
***Converted to 5-point scale

Ethnicity

A major concern of the research design was to include enough minorities to reduce as much variance as possible due to small samples for each ethnic group. There is a 12 percent minority enrollment in the District, and the survey has 16 percent. Compared to total enrollment percentages, Caucasians are underrepresented in the survey by six percent while "other" minorities are overrepresented by 2.3 percent. Percentage variations in the other groups are insignificant (Table 73 and Illustration 9).

Great caution must be taken in interpreting Tables 74 through 80 because of the small samples. Analysis employing small sample methods in judging statistical significance will be employed in future ethnic-related research. In this report, ethnic data will be presented in a descriptive manner, consistent with the reporting format of this project. There were only two Filipinos in the survey, and they will not be addressed in the narrative.

Two of every three students in all ethnic groups filed their applications from between two weeks and over three months before attendance in their first term (Table 74). Fifty percent of the 12 Black students filed during this time span. In rank order, those filing applications three months or more before the commencement of their first semester were Blacks, Asians, other, Caucasians, American Indians, and Hispanics.

Table 73
Ethnicity of Survey Respondents

	Matriculation Status				
	Full	Partial	Non	Survey Total	Enroll Total
Ethnicity	N/%*	N/%	N/%	N/%**	N/%***
Indian	21/44	23/48	4/8	48/5	286/2.1
Asian	4/17	19/83	0	23/3	247/1.8
Black	6/50	4/33	2/17	12/1	114/0.8
Caucasian	263/36	420/57	49/7	732/82	12,096/87.8
Filipino	0	1/100	0	1/0	70/0.5
Hispanic	13/30	30/68	1/2	44/5	729/5.3
Other	7/21	22/67	4/12	33/4	231/1.7
No Response	21/6	48/9	4/6	73	

*Percentage by ethnicity
**Percentage of 893 respondents
***Fall, 1990 enrollment

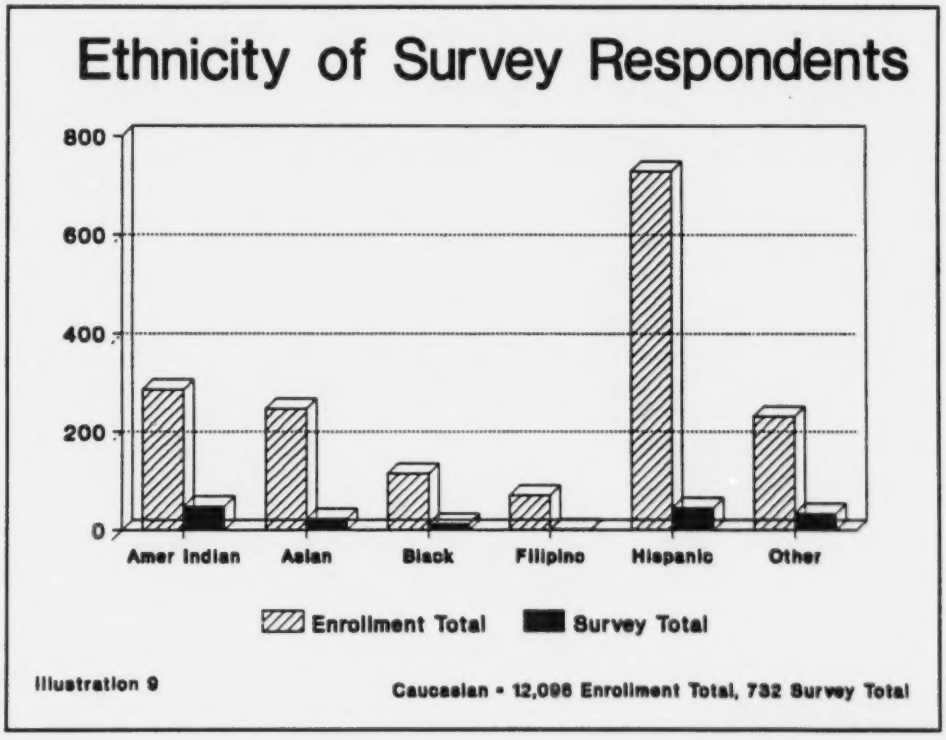


Table 74
Application Filing Date by Ethnicity

Filing Date	Amer Indian	Asian	Black	Cauc	Filip	Hisp	Other	Total
	N/%*	N/%	N/%	N/%	N/%	N/%	N/%	N/%**
(1)	18/35	11/41	5/42	290/37	1/50	14/29	11/31	350/37
(2)	16/31	6/22	1/8	224/29	1/50	16/33	6/17	270/28
(3)	3/6	0	0	51/7	0	1/2	3/9	59/6
(4)	3/6	0	0	34/4	0	1/2	0	38/4
(5)	3/6	2/7	2/17	50/6	0	3/6	1/3	61/6
(6)	0	1/4	0	7/1	0	0	0	8/1
(7)	9/17	7/26	4/33	126/16	0	12/25	14/40	172/18
Total/%**	52/5	27/3	12/1	782/82	2/0	48/5	35/4	958/100

*Percentage based on totals of each column
**Percentage based on 958 respondents (86 nonrespondents)

(1) 3+ months before semester
(2) 2-12 weeks before semester
(3) 1-2 weeks before semester
(4) Week before semester
(5) During 1st week of semester
(6) After 1st week of semester
(7) Don't remember

When analyzed by ethnicity, it was found that only 38 percent of all students had participated in orientation (Table 75). Eighty-two percent of the participants were Caucasian, yet only 38 percent of the total of 778 Caucasians participated. Blacks and American Indians had a higher participation rate than Caucasians while Hispanics and Asians had the lowest participation rates. As seen in other District research, Hispanics have the second highest attrition rate and are behind only Caucasians. Presuming orientation relates to perseverance and other success factors, a program to increase their participation is in order.

Table 75
Participation Rate in Orientation by Ethnicity

	Amer Indian	Asian	Black	Cauc	Filip	Hisp	Other	Total
	N/%*	N/%	N/%	N/%	N/%	N/%	N/%	N/%**
Yes	23/46	8/30	6/50	298/38	0	14/30	9/26	358/38
No	24/48	17/63	5/42	458/59	1/100	32/68	23/66	560/59
Don't Remember	3/6	2/7	1/8	22/3	0	1/2	3/9	32/3
Total/%**	50/5	27/3	12/1	778/82	1/0	47/5	35/4	950/100

*Based on column totals
**Percentage of 950 (94 nonrespondents)

Multiple factors need to be included in these analyses to gain a more complete and valid picture of participation rates, evaluations, and their significance to success. As an example, when looking at orientation participation from an ethnic perspective, it would be more helpful to also know the gender, age, values, skill levels, past educational performance, units taken, hours worked, etc. A two-dimensional analysis is too shallow and leads to a very limited and inadequate perspective.

Eighty-nine percent of the respondents met with a counselor (Table 76) and were led by the Hispanics (98%) and followed by the Caucasians (89%). Eight of 10 students in the other groups met with a counselor.

Table 76
Ethnicity of Those Meeting with Counselor

	Amer Indian	Asian	Black	Cauc	Filip	Hisp	Other	Total
	N/%*	N/%	N/%	N/%	N/%	N/%	N/%	N/%**
Yes	43/84	19/83	10/83	668/89	2/100	44/98	28/82	814/89
No	8/16	3/13	2/17	81/11	0	1/2	4/12	99/11
Don't Remember	0	1/4	0	1/0	0	0	2/6	4/0
Total/%**	51/6	23/3	12/1	750/82	2/0	45/5	34/4	917/100

*Based on column totals
**Percentage of 917 (127 nonrespondents)

Seventy-two percent of 952 respondents took ten or more units (Table 77) led by the Blacks followed by the American Indians and Caucasians with 73 percent each, Asians with 70 percent, and Hispanics with 60 percent. A more refined follow-up survey of all students and a variety of unique student circumstances including ethnicity may shed more light on students' values, needs, motivation, and related behavior to give a clearer picture as to what action plans are needed for specific areas or groups.

Table 77
Number of Units Taken by Ethnicity

	Amer Indian	Asian	Black	Cauc	Filip	Hisp	Other	Total
Units	N/%*	N/%	N/%	N/%	N/%	N/%	N/%	N/%**
1-3	3/6	1/4	0	32/4	0	3/6	1/3	40/4
4-6	2/4	3/12	2/17	68/9	0	5/10	3/9	83/9
7-9	9/18	4/15	1/8	114/15	1/50	11/23	7/20	147/15
10-12	19/37	2/8	4/33	236/30	0	13/27	8/23	282/30
13-15	13/26	10/39	4/33	223/29	1/50	12/25	9/26	272/29
16+	5/10	6/23	1/8	105/14	0	4/8	7/20	128/13
Total/%**	51/5	26/3	12/1	778/82	2/0	48/5	35/4	952/100

*Percentage based on column totals
**Percentage based on 952 Ss (92 nonrespondents)

The number of units dropped by ethnic group was investigated, and 66 percent of all the students dropped from one to three units while another 29 percent dropped from four to six units to account for 95 percent (323 students) of those dropping classes (Table 78). Only one in three (33%) of the survey sample reported dropping any classes at all, and the number of units dropped amounted to primarily one class with some dropping two. Consequently, the numbers in each group were too small to provide any practical information.

Table 78
Units Dropped by Ethnicity

Units	Amer Indian N/%*	Asian N/%	Black N/%	Cauc N/%	Filip N/%	Hisp N/%	Other N/%	Total N/%**
1-3	10/63	5/50	5/83	182/66	0	8/67	13/72	223/66
4-6	5/31	5/50	1/17	82/30	0	3/25	4/22	100/29
7-9	1/6	0	0	11/4	0	1/8	1/6	14/4
10-12	0	0	0	2/1	0	0	0	2/1
13-15	0	0	0	1/0	0	0	0	1/0
16+	0	0	0	0	0	0	0	0
Total/%**	16/5	10/3	6/2	278/82	0	12/4	18/5	340/100

*Percentage based on column totals
**Percentage based on 340 Ss (704 nonrespondents)

With the exception of the nonmatriculants, the students were still enrolled as full-time students. As noted earlier, this suggests these students originally enrolled in 15 or more units and dropped one or two courses. Two of three in the survey indicated they had not dropped any classes, and 62 percent of those responding (998) reported they were taking 12 or more units.

Those who had dropped all classes were not included in this survey since it was administered the week immediately preceding finals. As "perseverers," the survey sample displayed a low attrition rate. The same survey needs to be administered to a dropout group sample to note differences between the two groups.

Two of every three students in the survey reported working (Table 79). Most (35%) worked 21 to 30 hours a week followed by those working 31 to 40 hours (28%) and 11 to 20 hours (27%). The average number of hours worked per week was 27 which is considerable and may account for the dropping of one to two classes because of limits put on students' time to meet all of their responsibilities. The number of hours worked must be considered when planning for courses. This is reinforced by the students' acknowledgement that they needed more help in organizing their time.

Table 79
Hours Worked by Ethnicity

Hours	Amer Indian N/%*	Asian N/%	Black N/%	Cauc N/%	Filip N/%	Hisp N/%	Other N/%	Total N/%**
1-10	3/9	1/8	0	25/4	0	1/3	5/18	35/5
11-20	9/28	6/46	1/13	153/27	0	7/20	7/25	183/27
21-30	10/31	2/15	4/50	202/36	2/100	14/40	9/32	243/35
31-40	7/22	4/31	2/25	162/29	0	10/29	5/18	190/28
40+	3/9	0	1/13	26/5	0	3/9	2/7	35/5
Total/%**	32/5	13/2	8/1	568/83	2/0	35/5	28/4	686/100

*Percentage based on column totals
**Percentage based on 686 Ss (358 nonrespondents)

A higher percentage (88%) of Blacks work 21 or more hours a week compared to Hispanics (78%), Caucasians (70%), and American Indians (62%). Asians working the same number of hours represented 46 percent of their group's total. Further analysis is recommended to determine the degree of relationship between the number of hours worked, units taken, units dropped, and grade point average. The findings would serve as a foundation for advising students.

As seen earlier and in Table 80, the students' satisfaction with Sierra College is quite high with a mean score of 4.29 on a 5-point scale. American Indians expressed the greatest satisfaction with a mean score of 4.39 followed by Caucasians (4.31), Hispanics (4.2), Blacks (4.15), and Asians (4.05). Small sample numbers of minorities may lead to greater variation, and the results must be interpreted accordingly. However, all students, irrespective of their ethnicity, give high marks for their satisfaction with Sierra College.

Nothing was found in the cursory analysis of the age, gender, and ethnic focus groups to give rise to extreme alarm over negative and differential impacts. The survey and other research do point out that more concerted efforts need to be made in some areas with specific focus groups. The study was not designed to measure these events, and such analysis is scheduled for the future.

Table 80
Satisfaction Level with Sierra College by Ethnicity

	Amer Indian	Asian	Black	Cauc	Filip	Hisp	Other	Total
	N/%*	N/%	N/%	N/%	N/%	N/%	N/%	N/%**
Not(1)	0	0	0	3/0	0	0	1/3	4/0
Not Very(2)	2/4	1/4	0	17/2	0	1/2	3/9	24/3
Somewhat(3)	20/39	15/63	7/64	359/46	0	26/55	16/47	443/47
Very(4)	30/58	8/33	4/36	395/51	2/100	20/43	14/41	473/50
Total/%**	52/6	24/3	11/1	774/82	2/0	47/5	34/4	944/100
Converted Mean***	4.39	4.05	4.15	4.31	5.0	4.2	4.1	4.29

*Based on column totals
**Based on 944 Ss (100 nonrespondents)
***Converted to 5-point scale

FINDINGS, DISCUSSION, AND RECOMMENDATIONS

Passage of AB3 brought many existing student service activities together in a coordinated program called matriculation. The intent of matriculation is to develop a system of services to guarantee equitable access and success to all who enroll in California public community colleges.

The bill addressed seven components, including research, to provide accountability measures to determine the effectiveness or success of the program's goals. The other six components are admissions, orientation, assessment, counseling, registration, and follow-up procedures.

A survey measuring student participation, perceptions, evaluations, and satisfaction with matriculation was administered to 1,044 students during the last week of instruction in the Spring semester of 1990. Students were divided into three groups. The first were the fully matriculated or those who took at least one of the three assessment tests for reading, English, or mathematics; participated in orientation; and saw a counselor. Partially matriculated students participated in one or two of the three components, and nonmatriculated students participated in none of the three.

There were three distinct divisions to the 48 item questionnaire. They were: 1) matriculation component questions about admissions, orientation, assessment, counseling, and registration; 2) student goals, major, self-assessment of skills, and perceived areas of needed assistance; and 3) demographics, employment, units taken and dropped, and when they first attended college.

Wide participation in matriculation was found in the sample

with 94 percent participating in one to three of the activities measured. Only 32 percent were fully matriculated. This seems to reflect the 31 percent of students who first enrolled in the Fall of 1989 when greater emphasis was placed on student participation in all components.

Generally, students feel those matriculation components assessed are meeting intended goals and objectives and, based on their moderately high ratings, matriculation can be judged a success. It is felt the goals and measurable objectives of all parts of the program need additional definition and must show a critical path and relationship to one another so as to produce a more integrated, coordinated program.

Facets of the components receiving excellent ratings were satisfaction with Sierra College, students' self-evaluation of reading skills, helpfulness of orientation materials, helpfulness of vocational/career tests, and the explanation of test results.

Also commended and deserving recognition were the services provided by the admissions staff, students' self-evaluation of English skills, convenience of the application and admission process, overall helpfulness of the counselors, and the written information on test results.

Students rated their reading, English, and math placements the lowest and felt orientation was not extremely effective in choosing classes, one of its major goals.

The discrepancies between student perceptions of their skills, test results, and placement need further investigation. This is particularly true in light of their expressed need for additional help in mastering reading, English, and mathematics skills and the number who tested below the collegiate level. Further research into placement recommendations based on assessment scores and success is planned and may shed more light on the issue.

It is suggested a fully developed student educational plan (SEP) contain assessment scores, recommended courses, and the courses students actually take. Are there differences between recommended placements and courses taken? If so, what are they and what significance can be found in the differences? Are the success rates higher for those who follow the recommendations than for those who do not?

The rating of overall counselor helpfulness was very good. Counseling services ranged in rank order from eighth to sixteenth of 21 areas. Activities requiring more complex decision-making processes and a longer period of time ranked slightly lower than those that could be met on a more immediate basis.

An extension of the orientation-counseling process--including choosing goals, programs, courses, and transfer patterns--needs to be considered as a follow-up function. The fully matriculated rated counseling services higher than the partially matriculated. They also saw the counselors more often

to suggest they were finding answers to their questions.

The application-admission process and service received commendable ratings. Approximately one half of the students had filed their applications three or more months prior to enrolling. Another one third filed from two weeks to three months before the term began. Twelve percent more of the fully matriculated filed early compared to the partially matriculated. Nonmatriculants filed two weeks before school began or during the first week of the term.

Much has been said about offering an orientation to the late applicants-registrants. Aside from the logistics of managing about half of the student population in this fashion, the needs of this population must be determined in order to develop a program to meet their unique needs, if in fact they differ at all. This particular group fits the general characteristics of the adult learners who comprise approximately 50 percent of the total enrollment. They need to be surveyed to assess how the institution can improve their success rate.

Only 37 percent attended orientation which is the "instructional" component of the program. One of its prime goals is to prepare students for course-choosing activities, most particularly their counseling appointments. Students did not feel orientation was that helpful and ranked that element 19th out of 21.

Orientation materials were judged to be very good, and approximately one of three participants were led to other services. Better means of recording those who participate in orientation need to be instituted. The information should be included in the SEP so the counselor will know if the student has had the proper instruction to prepare for counseling.

The purpose, goals, and measurable objectives of orientation need study and clearer definition. The one hour allocated to orientation seems inadequate to accommodate all of the activities. Student needs must be determined, e.g., what courses should be taken and how, in order to focus on those issues. Priorities for the limited time must be established and be student-centered.

The services most sought and the areas in which the students expressed the greatest need should be given emphasis in the orientation/counseling/follow-up process. Activities requiring a longer term to completion should be planned accordingly. Other activities such as vocational interest tests, organizing time, and test-taking techniques might be considered closer to the time of the students' need for them. Students are more apt to attend a seminar on how to prepare and take a test at midterm time than in the first week or two of school. These "seminars" could be joint efforts between faculty of particular disciplines and counselors.

Counseling was very helpful overall in assisting students to choose their courses. Counseling probably represents the most

critical of all matriculation components. It becomes the nexus or juncture where a number of variables are given professional consideration, weighed, and result in "advice" to the student. The advice must address a host of interconnected variables such as ability, educational history, values, attitudes, goals, etc. in providing the best recommendations to the student. The counseling function attempts to maximize the "fit" between the student and the institution. The better the fit, the greater the probability of success.

The admissions, orientation, and assessment findings come together at the time of counseling to provide some of the information required to provide adequate counseling. All of this must be done in 30 minutes, the time allowed for each student. If the amount of time is not to be expanded, it becomes more critical that the other components that lead to counseling be made as complete and effective as possible.

To this end, critical path analyses of functions need to be implemented to detail the goals, processes, internal relationships, and expected outcomes. Such a model can then be evaluated and fine-tuned to make the most efficient and effective use of resources.

An outcome of the admission/orientation/assessment/ counseling sequence is registration. Students reported having usually or always gotten the courses they wanted. Three of four got their classes in less than thirty minutes with 43 percent having registered in 15 minutes or less. Most of these students registered in the prior semester when course availability was greater. Recommended courses and those actually taken need to be recorded on the SEP to measure any discrepancies between the two and determine if students usually got the courses that they wanted or were recommended.

Transfer and associate degree patterns need to be emphasized with 57 percent of the students declaring a transfer goal and 21 percent pursuing an AA or AS degree. Vocational and technical fields were the major fields of study. Future surveys will have to have more discreet categories to provide a more specific profile of major fields of study, i.e., business.

Thirty-eight percent of the students declared or changed their college goal during or after their first semester. A more elaborate and inclusive follow-up of all students is suggested in order to assist students in these matters. An exploratory program for undecided students should be institutionalized with definite purposes and procedures.

This particular component could be bolstered by the classroom research technique which would serve several major purposes. First, it improves the teaching-learning environment and possibly student success. It also creates a critical link from the beginning of the semester to the end through intervention activities. The final objective would be to incorporate classroom research into the matriculation process, reinforcing a research-pervasive environment to promote greater

student success. It was noted tutoring was not considered as an element in the matriculation schema and may need to be included.

Age, gender, and ethnicity were studied in an attempt to detect if any differential impacts became obvious. The few differences noted do not appear to be negative but rather quite positive.

Younger students were more likely to be fully matriculated and classified as full-time but were a bit less satisfied with Sierra College than older cohorts. Women filed their applications earlier, took and dropped fewer units, and were more satisfied with Sierra College than the men. More women saw a counselor and were working fewer hours per week.

Participation in matriculation by Caucasians was slightly less than non-Caucasians who also had a higher percentage taking assessment tests. There were 177 non-Caucasians in the survey, and when those students were further reduced to more specific categories, their small numbers make any interpretation speculative at best.

In view of the above, Black students filed their applications earlier and had a higher percentage who were fully matriculated, taking 10 or more units, and participating in orientation. They ranked fourth out of six in the percentage seeing a counselor.

Hispanics are the largest minority in the District and enrollment. In the survey, they were second with 44 students behind American Indians with 48. They ranked sixth (last) in filing an application three or months before the semester began, fourth in orientation participation, sixth in the percentage taking 10 or more units, and were second highest in the percentage working 21 hours a week or more.

American Indians exhibited the greatest satisfaction with Sierra College followed by Caucasians and Hispanics. Asians showed the least satisfaction with a mean score of 4.05, which is still high, on a 5-point scale.

The following recommendations are set out in abbreviated form to encourage fuller participation and discussion by staff with the Research and Planning Office. The goal is to develop new insights, involvement, and strategies to evaluate the matriculation program. These recommendations are not all-inclusive and will be expanded and made richer through staff participation.

1. Each matriculation component subchair, with the participation of the Executive Dean of Research and Planning, should review the document thoroughly, comment on the findings, and make recommendations for his or her unit that includes goals, measurable objectives, and action plans.

2. The Research Advisory Group (RAG) needs to recommend

areas needing further study and evaluation to include the incorporation of other pertinent or related research demands, e.g., prerequisite evaluations, student right-to-know, etc.

3. The linkage between all components needs to be more clearly defined with an intent to show relationships of one component to another.

4. Strategies need to be developed to assess many activities on a formative and summative basis.

5. The impact of matriculation on skill development, other courses, and services needs evaluating as does the perseverance of students from course to course.

6. Time allocated to orientation, assessment, and counseling should be evaluated to determine if appropriate to meeting the goal of each.

7. Perform a cohort study comparing the first-time, day students in the Fall of 1988 (matriculation not required) to those in the Fall of 1989. Statewide standards of success will be used as dependent variables.

8. Consider orientation as a longer range, required course for students. This concept can be expanded to include generic survey "courses" for various disciplines akin to faculty advising.

9. With the research and planning analyst, create the database necessary to perform higher level prescriptive analytical studies consistent with the *Local Research Options*, e.g., assessment cut scores, target groups, etc.

10. Complete a random sample study of those who dropped out of the Spring, 1990, term and were not included in this survey. Administer the same survey and compare the differences.

11. Work with Staff Development in an attempt to coordinate classroom research with matriculation and other forms of research.

Matriculation has been given a positive and fair evaluation by the students. More sophisticated methods of analysis are planned, and broader participation of staff is needed to improve the program and promote greater student and institutional success.

APPENDIX A

Survey Questionnaire

SIERRA COLLEGE
• 5000 Rocklin Road • Rocklin CA 95677 • Tel.916-624-3333 •

May 14, 1990

Dear Sierra College Student:

We need your help! Would you please take a few minutes to give us that help?

The attached questionnaire is designed to find out what you, as a Sierra College student, think about the college. The only way we can make sure that our programs and services are meeting your needs is if you give us your honest opinion about what we are doing now.

The questionnaire will only take about ten minutes to complete, and everything you say will be kept strictly confidential. Your answers will help us make changes that we hope will benefit you, your fellow students, and students of the future.

Please accept my personal thanks for your time, your assistance, and your candor! If you have any questions, please feel free to call or visit my office.

Sincerely,

Gerald C. Angove
President and District Superintendent

GCA:jdf

SIERRA COLLEGE

STUDENT EVALUATION SURVEY

INSTRUCTIONS

Please answer every question to the best of your knowledge. Unless the question states otherwise, please check only one response to each question.

THANK YOU!

ADMISSIONS

By Admissions, we mean the filing of your green application for admission to Sierra College.

1. When did you first file your application for admission to Sierra College?

   - ☐ Three Months or More Before the Semester Began
   - ☐ Between Two Weeks and Three Months Before the Semester Began
   - ☐ Between One and Two Weeks Before the Semester Began
   - ☐ In the Week Before the Semester Began
   - ☐ During the First Week of the Semester
   - ☐ After the First Week of the Semester
   - ☐ Don't Remember

2. Where did you file your application?

   - ☐ On the Rocklin Campus
   - ☐ In Grass Valley
   - ☐ In Truckee/North Tahoe
   - ☐ Somewhere Else
   - ☐ Don't Remember

3. How would you rate the convenience of the application and admissions process?

   - ☐ Excellent
   - ☐ Good
   - ☐ Fair
   - ☐ Poor
   - ☐ No Opinion

4. How would you rate the service you received from the Admissions Office staff?

   - ☐ Excellent
   - ☐ Good
   - ☐ Fair
   - ☐ Poor
   - ☐ No Opinion

ORIENTATION

By Orientation, we mean the process that familiarizes students with the College and with its policies, programs, and services.

5. Did you participate in a formal college orientation program?

- ☐ Yes
- ☐ No (PLEASE SKIP TO QUESTION #9)
- ☐ Don't Remember (PLEASE SKIP TO QUESTION #9)

IF YOU PARTICIPATED IN A FORMAL ORIENTATION:

6. In general, how helpful was the information presented during the orientation?

- ☐ Very Helpful
- ☐ Somewhat Helpful
- ☐ Not Very Helpful
- ☐ Not Helpful at All
- ☐ No Opinion

7. How useful was the orientation in helping you choose your classes?

- ☐ Very Useful
- ☐ Somewhat Useful
- ☐ Not Very Useful
- ☐ Not Useful at All
- ☐ No Opinion

8. Did the orientation lead you to visit other campus services?

- ☐ Yes
- ☐ No
- ☐ Don't Remember

ASSESSMENT

By Assessment, we mean the reading test, the English placement test, and the math test.

9. Which of the following tests have you taken? **Please check all that apply.**

- ☐ Reading Test
- ☐ English Placement Test
- ☐ Math Test
- ☐ None (PLEASE SKIP TO QUESTION #14)
- ☐ Don't Remember (PLEASE SKIP TO QUESTION #14)

IF YOU HAVE TAKEN AT LEAST ONE ASSESSMENT TEST:

10. Did a member of the college staff explain your test results to you?

	Yes	No	Don't Remember	Not Applicable
Reading Test	☐	☐	☐	☐
English Placement Test	☐	☐	☐	☐
Math Test	☐	☐	☐	☐

11. How would you rate the college staff member's explanation?

- ☐ Very Informative
- ☐ Somewhat Informative
- ☐ Adequate
- ☐ Not Very Informative
- ☐ Not Informative at All
- ☐ No Opinion
- ☐ Not Applicable - College Staff Did Not Explain Results

12. How would you rate the written information you were given on your test results?

- ☐ Very Informative
- ☐ Somewhat Informative
- ☐ Adequate
- ☐ Not Very Informative
- ☐ Not Informative at All
- ☐ No Opinion
- ☐ Not Applicable - I Was Not Given Written Information

13. How would you rate your placement in the following courses? "Too Low" means the course is too easy for you, "Too High" means the course is too difficult for you, and "Just Right" means the course is at just the right level for you.

	Too Low	Too High	Just Right	Don't Know	Not Applicable
Reading	☐	☐	☐	☐	☐
English	☐	☐	☐	☐	☐
Math	☐	☐	☐	☐	☐

COUNSELING AND ADVISEMENT

By Counseling and Advisement, we mean assistance in defining your goals at the college and in selecting programs and courses.

14. Have you taken any tests at Sierra College to help you determine your vocational or career interests?

- ☐ Yes
- ☐ No (PLEASE SKIP TO QUESTION #16)
- ☐ Don't Remember (PLEASE SKIP TO QUESTION #16)

IF YOU HAVE TAKEN A VOCATIONAL OR CAREER TEST:

15. How helpful did you find the vocational or career test?

- ☐ Very Helpful
- ☐ Somewhat Helpful
- ☐ Not Very Helpful
- ☐ Not Helpful at All
- ☐ No Opinion

16. Have you ever met with a counselor at Sierra College?

- ☐ Yes
- ☐ No (PLEASE SKIP TO QUESTION #20)
- ☐ Don't Remember (PLEASE SKIP TO QUESTION #20)

IF YOU HAVE MET WITH A COUNSELOR AT LEAST ONCE:

17. How many times have you met with a counselor?

- ☐ Once
- ☐ Two to Five Times
- ☐ Six to Ten Times
- ☐ More than Ten Times
- ☐ Don't Remember

18. How would you rate the counseling you have received on the following?

	Excellent	Good	Fair	Poor	No Opinion
Helping you clarify your goals at the college	☐	☐	☐	☐	☐
Helping you understand how to achieve your goals at the college	☐	☐	☐	☐	☐
Helping you choose a program of study	☐	☐	☐	☐	☐
Helping you choose your classes	☐	☐	☐	☐	☐
Helping you understand what the requirements were for getting into a class	☐	☐	☐	☐	☐
The counselor's overall helpfulness	☐	☐	☐	☐	☐

19. Did the counseling staff refer you to any other campus services?

- ☐ Yes
- ☐ No
- ☐ Don't Remember

REGISTRATION

By Registration, we mean actually signing up for classes.

20. When did you register for this semester's classes?

- ☐ During Last Semester
- ☐ During Semester Break
- ☐ During the First Two Weeks of School
- ☐ After the First Two Weeks of School
- ☐ Don't Remember

21. Where did you register?

- ☐ On the Rocklin Campus
- ☐ In Grass Valley
- ☐ In Truckee/Tahoe City
- ☐ Somewhere Else
- ☐ Don't Remember

22. Were you able to register for this semester in a single day?

- ☐ Yes
- ☐ No (PLEASE SKIP TO QUESTION #24)
- ☐ Don't Remember (PLEASE SKIP TO QUESTION #24)
- ☐ Not Applicable - I Registered by Mail (PLEASE SKIP TO QUESTION #24)

IF YOU WERE ABLE TO REGISTER IN A SINGLE DAY:

23. How many minutes did you have to stand in line?

- ☐ 15 Minutes or Less
- ☐ 16-30 Minutes
- ☐ 31-60 Minutes
- ☐ 61-90 Minutes
- ☐ More than 90 Minutes
- ☐ Don't Remember

24. How often have you been able to get all the classes you wanted in a semester?

- ☐ Always
- ☐ Usually
- ☐ Sometimes
- ☐ Rarely
- ☐ Never
- ☐ Don't Remember

YOUR EDUCATION AT SIERRA COLLEGE

25. Which of the following best describes your **main goal** in attending Sierra College? **Please check only one.**

- ☐ Improve My Skills in Reading, English, or Math
- ☐ Learn Job Skills
- ☐ Update or Increase My Job Skills
- ☐ Earn a Certificate
- ☐ Earn an Associate (AA or AS) Degree
- ☐ Transfer to Another Community College
- ☐ Transfer to the California State University System
- ☐ Transfer to the University of California System
- ☐ Transfer to Another Four-Year College or University
- ☐ Take Courses for Recreation or Personal Development
- ☐ Undecided (PLEASE SKIP TO QUESTION #30)

26. Which of the following contains your major area of study? **Please check only one.**

- ☐ Humanities/Fine Arts/English
- ☐ Social Sciences
- ☐ Natural Sciences/Mathematics/Engineering
- ☐ Vocational/Technical/Occupational
- ☐ Undecided

27. When did you decide what goal you were going to pursue at the college?

- ☐ Before I Arrived at the College
- ☐ During a Formal College Orientation Program
- ☐ During My First Semester at the College
- ☐ After My First Semester at the College

28. Did you decide on your goal or change it as a result of attending Sierra College?

☐ Yes
☐ No (PLEASE SKIP TO QUESTION #30)

IF YOU DECIDED ON OR CHANGED YOUR GOAL AS A RESULT OF ATTENDING THE COLLEGE:

29. Which of the following led you to decide on or change your goal? **Please check all that apply.**

☐ The Results of Assessment Tests (Reading, English Placement, or Math)
☐ The Results of Vocational or Career Interest Tests
☐ Conversation with a Counselor
☐ Conversation with a Member of the Faculty
☐ Conversation with an Administrator
☐ Conversation with Another Type of Staff Member
☐ Not Doing as Well in My Major as I Thought I Would
☐ Not Enjoying the Classes in My Major
☐ Finding an Area of Study that I Enjoyed More
☐ A Lack of Job Opportunities in the Area I Originally Selected

30. How would you rate your skills in the following areas?

	Excellent	Good	Fair	Poor	Don't Know
Reading	☐	☐	☐	☐	☐
English	☐	☐	☐	☐	☐
Math	☐	☐	☐	☐	☐
Study Skills	☐	☐	☐	☐	☐

31. Do you feel you need help in any of the following areas? **Please check all that apply.**

☐ Taking Good Notes in Class
☐ Reading College Texts and Other College Books
☐ Preparing for Tests
☐ Taking Tests
☐ Organizing My Time
☐ Speaking, Reading, or Writing English
☐ I Don't Need Help in Any of These Areas

32. Do you feel you need more help than you are already getting in any of the following areas in order to achieve your goal at Sierra College? **Please check all that apply.**

☐ Academic Counseling
☐ Child Care
☐ Financial Aid
☐ Personal Counseling
☐ Transportation
☐ Vocational or Career Counseling
☐ I Don't Need More Help in Any of These Areas in Order to Achieve My Goal at Sierra College

33. Have you ever visited any of the following Sierra College programs and services for information or help? **Please check all that apply.**

- ☐ Career Center
- ☐ Counseling Center
- ☐ Disabled Student Center
- ☐ Extended Opportunity Programs and Services (EOPS) Office
- ☐ Financial Aids Office
- ☐ GAIN Office
- ☐ An Instructor at the College
- ☐ Job Placement Office
- ☐ Skill Development Center
- ☐ Tutoring Center
- ☐ Veterans' Services Office
- ☐ I Haven't Visited Any of These Programs and Services for Information or Help

34. Overall, how satisfied are you with Sierra College?

- ☐ Very Satisfied
- ☐ Somewhat Satisfied
- ☐ Not Very Satisfied
- ☐ Not at All Satisfied
- ☐ No Opinion

35. Please use the space below to make any comments or suggestions you have about Sierra College and its programs, services, courses, instructors, counselors, administrators, or staff. **Please be as specific as possible.**

_____

_____

_____

_____

_____

_____

LAST, A LITTLE ABOUT YOU, PLEASE

Please remember that your responses will be kept strictly confidential.

36. In what semester did you first attend Sierra College?

- ☐ Fall 19____
- ☐ Spring 19 ____
- ☐ Summer 19____

37. Would you classify yourself as a re-entry student?

- ☐ Yes
- ☐ No
- ☐ Don't Know

38. How many units had you completed at Sierra College **before this semester**? ____

39. How many units are you taking **this semester**? ____

40. Did you drop any classes this semester?

- ☐ Yes
- ☐ No (PLEASE SKIP TO QUESTION #42)

IF YOU DROPPED ANY CLASSES THIS SEMESTER:

41 . How many units did you drop? ____

42. When do your classes meet this semester?

- ☐ During the Day Only (Before 4:00 P.M.)
- ☐ In the Evening Only (After 4:00 P.M.)
- ☐ Both Day and Evening (Before and After 4:00 P.M.)

43. Are you currently employed?

- ☐ Yes
- ☐ No (PLEASE SKIP TO QUESTION #45)

IF YOU ARE CURRENTLY EMPLOYED:

44. On the average, how many hours per week do you work? ____

45. What is the highest level of education that you have **completed**?

- ☐ Less than High School
- ☐ High School Diploma
- ☐ GED
- ☐ Certificate
- ☐ Associate (AA or AS) Degree
- ☐ Bachelor's (BA or BS) Degree
- ☐ Master's (MA or MS) Degree
- ☐ Doctorate (Ed.D., J.D., M.D., Ph.D.)

46. What is your age? _____

47. What is your gender?

- ☐ Male
- ☐ Female

48. What is your ethnicity?

- ☐ American Indian/Alaskan Native
- ☐ Asian/Pacific Islander
- ☐ Black/African-American
- ☐ Caucasian
- ☐ Filipino
- ☐ Hispanic/Mexican-American
- ☐ Other - Please Specify: _____

THANK YOU!

APPENDIX B

Conversion Table for 3-, 4-, and 5-Point Likert Scales

CONVERSION TABLE FOR 3-, 4- AND 5-POINT LIKERT SCALES

For the purposes of this study, all rating scales will be represented by the 5-point system.

3-Point		4-Point		5-Point		Alpha
1		1		1		F
1.02		1.03		1.04		
1.04		1.06		1.08		
1.06		1.09		1.12		
1.08		1.12		1.16		
1.1		1.15		1.2		
1.12	1.13	1.18	1.19	1.24	1.25	
1.14		1.21		1.28		
1.16		1.24		1.32		
1.18		1.27		1.36		
1.2		1.3		1.4		
1.22		1.33		1.44		
1.24	1.25	1.36	1.38	1.48	1.5	
1.26		1.39		1.52		
1.28		1.42		1.56		
1.3		1.42		1.6		
1.32		1.48		1.64		
1.34		1.51		1.68		
1.36	1.37	1.54	1.56	1.72	1.75	D-
1.38		1.57		1.76		
1.4		1.6		1.8		
1.42		1.63		1.84		
1.44		1.66		1.88		
1.46		1.69		1.92		
1.48		1.72		1.96		
1.5		1.75		2		D
1.52		1.78		2.04		
1.54		1.81		2.08		
1.56		1.84		2.12		
1.58		1.87		2.16		
1.6		1.9		2.2		
1.62	1.63	1.93	1.94	2.24	2.25	
1.64		1.96		2.28		D+
1.66		1.99		2.32		
1.68		2.02		2.36		
1.7		2.05		2.4		
1.72		2.08		2.44		
1.74	1.75	2.11	2.13	2.48	2.5	
1.76		2.14		2.52		
1.78		2.17		2.56		
1.8		2.2		2.6		
1.82		2.23		2.64		
1.84		2.26		2.68		
1.86	1.87	2.29	2.31	2.72	2.75	C-

3-Point		4-Point		5-Point		Alpha
1.88		2.32		2.76		
1.9		2.35		2.8		
1.92		2.38		2.84		
1.94		2.41		2.88		
1.96		2.44		2.92		
1.98		2.47		2.96		
2		2.5		3		C
2.02		2.53		3.04		
2.04		2.56		3.08		
2.06		2.59		3.12		
2.08		2.62		3.16		
2.1		2.65		3.2		
2.12	2.13	2.68	2.69	3.24	3.25	
2.14		2.71		3.28		C+
2.16		2.74		3.32		
2.18		2.77		3.36		
2.2		2.8		3.4		
2.22		2.83		3.44		
2.24	2.25	2.86	2.88	3.48	3.5	
2.26		2.89		3.52		
2.28		2.92		3.56		
2.3		2.95		3.6		
2.32		2.98		3.67		
2.34		3.01		3.68		
2.36	2.37	3.04	3.06	3.72	3.75	B-
2.38		3.07		3.76		
2.4		3.1		3.8		
2.42		3.13		3.84		
2.44		3.16		3.88		
2.46		3.19		3.92		
2.48		3.22		3.96		
2.5		3.25		4		B
2.25		3.28		4.04		
2.54		3.31		4.08		
2.56		3.34		4.12		
2.58		3.37		4.16		
2.6		3.4		4.2		
2.62	2.63	3.43	3.44	4.24	4.25	
2.64		3.46		4.28		B+
2.66		3.49		4.32		
2.68		3.52		4.36		
2.7		3.55		4.4		
2.72		3.58		4.44		
2.74	2.75	3.61	3.63	4.48	4.5	

3-Point		4-Point		5-Point		Alpha
2.76		3.64		4.52		
2.78		3.67		4.56		
2.8		3.7		4.6		
2.82		3.73		4.64		
2.84		3.76		4.68		
2.86	2.87	3.79	3.81	4.72	4.75	A-
2.88		3.82		4.76		
2.9		3.85		4.8		
2.92		3.88		4.84		
2.94		3.91		4.88		
2.96		3.94		4.92		
2.98		3.97		4.96		
3		4		5		A

APPENDIX C

Courses and Number of Students Surveyed by Cluster

Cluster A (Humanities/Fine Arts/English)

Course	No. Surveyed		Course	No. Surveyed
Art 10	33		French 1	31
Drama 10A	35		Music 10	20
English 1A	24		Phil 4	40
English 10	17		Spanish 1	36
TOTAL	236	13%		

Cluster B (Social Science)

Course	No. Surveyed		Course	No. Surveyed
Adm Jus 50	51		Human Dev 1	51
Anthro 2A	19		Psych 1	45
Econ 1A	43		Soc Sci 1	35
Geog 2	38		Soc 1	28
History 17A	35			
TOTAL	345	19%		

Cluster C (Natural Science/Math/Engineering)

Course	No. Surveyed		Course	No. Surveyed
Ag 5	13		Earth Sci 10	42
Anthro 1	22		Geog 1	27
Astro 10	59		Geol 1	30
Bio Sci 10	21		Math 13	32
Chem 10	16		Phys 10	59
TOTAL	321	18%		

Cluster D (Vocational/Technical/Occupational)

Course	No. Surveyed		Course	No. Surveyed
Bus 20	34		Mgt 1	30
CS 7	22		Mgt 10	27
CTC 1	17		Mkt 1	29
CTR 42	21		MT 10	14
DT 5	28		Nut/Fd 3	45
ET 8	17		PE 81	17
Forestry 1	30		Auto Tech 59	17
Int Des 1	15		Auto Tech 66A	21
TOTAL	384	21%		

Cluster E (Learning Skills

Course	No. Surveyed		Course	No. Surveyed
Bus A	29		Read 50	18
Bus 64	33		Read 70	26
Bus 85	23		Skl Dev 54	35
Chem A	29		Skl Dev 60	46
Engl A	33		Skl Dev 81	19
Engl B	32		Skl Dev 82	21
Math A	28		Skl Dev 91	25
Phys A	8			
TOTAL	405	22%		

Cluster F (Communications/Analytical Thinking)

Course	No. Surveyed		Course	No. Surveyed
Comm Stud 5	35		Pub Spk 1A	31
Comm Stud 10	35		Read 10	20
Journ 20A	9			
TOTAL	130	7%		

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